THE

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

Vol. VI. CHICAGO, MAY 22, 1886. No. 21.

THE ADDRESS IN OBSTETRICS.

HYSTERIA AND ITS RELATION TO DISEASES OF THE UTERINE APPENDAGES.

Delivered at the Thirty-Seventh Annual Meeting of the American Medical Association on Tuesday, May 5, 1886,

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MR. PRESIDENT AND FELLOWS OF THE AMERICAN MEDICAL ASSOCIATION:—The year that has just passed has given no remarkable discoveries either in obstetrics or gynecology, and therefore in attempting to comply with the rule requiring the chairman of each Section to present a *résumé* of new things in his department, I can only emphasize some of the matters that have been alluded to, perhaps in some former addresses, and weigh the experiences of individual members of the profession on some of the topics that have been more or less discussed. Time, which alone can give experience, makes sad havoc with many of our pet theories, however plausible they may seem when first advanced. We are constantly exploding some of the well accepted doctrines of the old teachers in every department of medicine, and in none more than in these two branches of the science. A familiar example of this occurred at the last meeting of this Association. I think no one theory held stronger place among us than that an accoucheur, after exposure to septic influences, should for a long time refrain from attendance upon new cases. A neglect of this rule was generally deemed criminal, and the penalty was visited upon the victim in the most severe and summary manner.

The carefully prepared and exhaustive paper of Dr. George F. French, who collected opinions from the ablest men in the profession, from this country and Europe, together with his own critical experiments, shows us that by proper measures and strict, absolute cleanliness, we can safely continue the daily routine of obstetrical work, with no months of delay, or anxiety as to the results of such continuance. The criminality now lies in the neglect of the proper precautions within the reach of every practitioner. Time alone may not be sufficient—in fact, may be no element of safety, if all the other elements are omitted. If the seed sown by that one paper has been properly cultivated and has borne the same kind of fruit, the harvest within the year just past must be abundant.

I will not attempt to review the literature of obstetrics for the past year, so far as relates to new discoveries, or new methods of treatment of the parturient woman, but simply allude to some of the practical points which have been more or less *sub judice* for many years. Among the many of these questions, the early signs of pregnancy may be mentioned. I have several times within the past year applied the test recommended by Hegar and alluded to in several journals, viz.: the increase in the anterior curvature of the uterus, with increased elasticity of the walls. I think it a valuable sign and one that is apparent early. For obstinate vomiting of pregnancy, I believe no one measure has been found of such value as forcible dilatation of the cervical canal below the internal os, and lifting the uterus out of the pelvis and supporting by cotton packs or some form of pessary. The cases requiring the induction of abortion for this very distressing symptom will, I think, be very few if these measures are faithfully and carefully carried out. The induction of premature labor for deformity of pelvis or disproportionate head, as found by former pregnancies, is, I believe, fast finding favor with accoucheurs. From my own experience (very limited) I prefer the employment of the bougie, retained until labor begins, although some practitioners whose opinion I value, prefer the rapid manual dilatation. Where we fear a disproportionate head, I think the eighth month the best time for it, when a tolerable degree of certainty exists as to the period of conception.

The post-parturient management of the woman I think deserves much more consideration than it has formerly received. I am sure that until within a comparatively short period authorities have been disposed to teach a much more rigid system of dietetics for the woman who has just passed through her labor than the absolute necessities of the case require. I believe the "poor sloppy diet" of the lying-in room has been a fruitful source of the "lingering delay" and complications of childbed. Many a woman whose period of gestation has compelled her to forego all the pleasures of the table finds the demands of nature such that the most nutritious food is desired. In my opinion we will find much benefit from a lib-

eral construction of the rule that nature does not make mistakes often.

A word or two in regard to ameliorating the sufferings and shortening the process of labor. It seems that an unnecessary amount of suffering, both in degree and duration, attends the "normal labor" (so called) among the large majority of American women —that they do not, as a rule, bear children so easily as the women of the British Isles. I am very well convinced—not only from statistics, but from the general sentiment so prevalent among British practitioners, that a forceps delivery is rarely required. While it is not pertinent on this occasion to elaborate this very much—statistics being accessible and more or less familiar to all of you—I cannot but believe that the use of anæsthetics and the forceps, in labor, has done much to relieve the suffering and prevent many of the injuries formerly incident to the parturient process. I believe that vesico-vaginal fistulæ are becoming less frequent under the more careful and judicious use of the obstetric forceps, by means of which a long and tedious labor has been shortened, and the pressure has been removed from portions of the vagina that would otherwise have lost vitality and sloughed.

The treatment of the placenta, both at normal labor and at abortion, has been the cause of much discussion for the past few years. The views of Pajot, recently published, are so nearly in accord with my own experience and practice, that I cannot forbear alluding to them. He believes that, as a rule, the full term placenta is best delivered by prompt and gentle traction upon the cord, with the left hand, while the right index finger passed up along the cord intelligently regulates the amount of force necessary to be used. The earlier after the delivery of the child this is done, the more easily is it completed and less evil results follow.

I believe also, with him, that the forcible removal of the secundines in abortions, at almost any cost (now so prevalent), is by no means the safer practice. Remove them if it can be done without much trouble, or instrumental interference, but otherwise a careful tamponing and close watching will do less harm, save more lives and prevent a vast amount of future suffering.

In passing to the subject of gynecology I propose to occupy your time principally with one theme, that has engaged the attention of the profession and promoted much discussion during the past year, viz.: the removal of the uterine appendages—familiarly and variously characterized as Battey's, Tait's and Hegar's operation.

I am sure any practical work done in this direction will be regarded as testimony before a jury of the profession, and a basis for making a proper decision upon the merits or demerits of the operation. The mere dictum of any one man or set of men amounts to but little in our profession. Nothing is conclusive or convincing short of absolute experiment. When a man, however distinguished he may be, says that he has never seen any case where, in his opinion, the operation was required, such opinion amounts to but little in comparison with another who has believed it was required, and demonstrated by the operation a well-marked pathological condition, and cured his patient, who has suffered for years.

The profession has differed very widely as regards the indications for this surgical interference, some claiming that only by a "demonstration by touch" which shall determine absolute organic changes in the ovaries and tubes, should a diagnosis of disease be made. On the other hand, others become satisfied of the existence of structural changes by certain manifestations, which we term functional disturbances, and are commonly called by the terms reflex and hysterical. That a large class of cases exist in every community, that have been invalids for years, and have defied all methods of treatment, is a well known fact. It is largely to this class that I call your attention, and shall therefore devote the remaining portion of the time allotted to me to the discussion of

HYSTERIA AND ITS RELATION TO DISEASES OF THE UTERINE APPENDAGES.

I suppose it is equally true of medicine as everything else, that there is really "nothing new under the sun"—therefore we may as well select, as one of the topics for consideration, a well-worn subject for an essay on any medical occasion. Certainly nothing has been talked about or written upon more than hysteria. Even the laity are as familiar with the symptoms, pathology and treatment, as the (I might almost say) majority of the profession. No literature of the profession in any age is complete, that does not embrace more or less learned discussions upon this ever fruitful subject.

No one man from his own experience is able to fully represent in language the various and ever changing symptoms of this bane of the profession. I am well aware that in presenting this subject before you a smile of derision may almost unconsciously come, and a degree of surprise be manifest at the presumption of one who would attempt to evolve anything that might be new or interesting out of such a threadbare theme. And yet, when we find one of the modern writers on nervous diseases making the confession that "hysteria contributes absolutely nothing to the science of morbid anatomy," we are fully justified in advancing any theory that has a semblance of reason, especially if we can present any evidence that in the remotest degee will appear to sustain that theory. The absolute in our profession may be very limited, but the probable is almost indefinite. The sum total of medical science and knowledge rests upon the basis of this limited absolute and indefinite probable, the former having for its foundation principally anatomy and physiology, while the latter has the accumulated experiences, and observations, and experiments of thousands of educated students, through thousands of years. To the mass of the practical minds of these students the latter is as valuable as the former. When we find, after a series of experiments, that a constant result is reached by a continued course, we must finally admit that there is a relation of cause and effect. By countless multitudes of practitioners it has been found that opium is the antidote to pain, that quinia is antipyretic and

that chloroform is anæsthetic. These and many other now well accepted facts in the profession came to us, not by any inductive reasoning, but by the more common mode of experiment and close observation. Applying the latter method, together with what has come to us through the well known principles of physiology, to the disease known as hysteria, I believe we can at least make some little progress towards "contributing *something* to the science of morbid anatomy."

At the risk of being prosaic I must briefly allude to some of the more prominent symptoms of this classified disease. I am quite sure I shall not challenge very much discussion on this point, even if I incorporate into my description nearly every symptom of human suffering known to medical science. Their name is legion; I will use those necessary for the several illustrations. Sydenham thus describes the multiform manifestations of hysteria: "A day would scarcely suffice to reckon up all the symptoms of hysterical diseases; so various are they and so contrary to one another, that Proteus had no more shapes, nor the chameleon so great a variety of colors, and I think Democritus was pretty right (though he mistook the cause of the disease) when he wrote in an epistle to Hippocrates, that the womb was the cause of six hundred miseries, and of innumerable calamities. Nor are they only very various, but also irregular, that they cannot be contained under any uniform type, which is usual in other diseases, for they are, as it were, a disorderly heap of phenomena, so that it is very hard to write the history of the disease" His only explanation of the fact that women have the disease so much more frequently than men, is that "kindly nature has bestowed on the former a more delicate and fine habit of body, having designed them for an easy life, and to perform the tender offices of love." His "confusion of spirits," too many of them "collected in a crowd," and that the "ataxy of the spirits has vitiated the humors," seem hardly a sufficiently lucid explanation of the etiology of the disease, in these modern days of exacting pathology, and yet it was nearly if not quite as satisfactory as any of the many theories of our later pathologists: "It is nothing but an attack of hysterics;" "she is only nervous;" let her alone and she will come out of it all right;" "isn't this hysterical largely?" "surely there cannot be any organic lesion," etc.

Perhaps no better modern history of hysteria has been written than that of Hammond in his "Diseases of the Nervous System." In the first paragraph under the head of symptoms he says: "The phenomena of hysteria may be manifested as regards the mind, sensibility, motility and visceral action, separately or in any possible combination. Thus it is not uncommon to meet with cases in which the only evidence of the disease is seen in abnormal mental action; others are characterized solely by derangements of sensibility, such as hyperæsthesia or anæsthesia; others by aberrations of the faculty of motion, such as paralysis, spasms and contractions. Again, all these categories may be witnessed in the same person, giving rise, among other phenomena, to coma and convulsions; and again, some one or more of the viscera may be deranged in their functions, and thus the appearance of organic disease be simulated."

These mental symptoms are so very various that any attempt to recite them would be a history of the whole class of mental diseases, from the slightest emotional disturbances to the most violent exhibitions of joy or grief, entirely disproportionate to the cause, to be followed, perhaps, by the utmost indifference to all surrounding influences. That the will to a great extent loses its power, at times, no one familiar with these cases can for a moment doubt, although under the influence of some strong exciting cause, the patient suddenly acquires the lost volitional power. Illusions and hallucinations of all kinds and degree occur in many of these cases, and we find most striking illustrations of the most complete aberrations of the special senses. "Images are seen where there is nothing, voices are heard where there is absolute silence, odors are smelt where there is nothing to smell, and strange tastes are perceived where the mouth is empty." The vagaries of the intellect are not less strange than of the special senses. The perceptive faculties are often most wonderfully sharpened, while the reasoning powers and volubility are remarkably increased. As often we find the most brilliant intellects dulled and the conversational powers almost entirely wanting. The principal points of difference between this and insanity seem to be the less duration of the phenomena and less power to influence the patient's actions.

In the deranged sensibility we find all degrees of hyperæsthesia and anæsthesia, the most common seat being the skin, in the region of the mammary glands, face, throat, extremities, and especially about the head in the form of headache. Hammond quotes Briguet as saying that "out of 356 hysterical patients 300 were constantly subject to headache." Neuralgia in all its manifestations, in all parts of the body, may thus exist, without our being able to give it a definite origin. Anæsthesia, with a corresponding loss of feeling in all these parts of the body, may exist, and even the special senses be affected to the point of producing blindness, deafness, loss of taste and smell. I have seen some very remarkable cases of blindness due to reflex disturbances of the genital organs, which were at once relieved by appropriate treatment of these lesions.

Hysterical paralysis, as manifested in hemiplegia, paraplegia, or, much more limited than either, aphonia-spasms, tonic and clonic, may affect almost every muscle in the body, continuing a long time, and simulating organic lesions in muscles, joints and mucous membranes.

The functional actions of the viscera are by far the most surprising manifestations of hysteria, and frequently the most persistent and distressing. Of all these perhaps there is no one more commonly affected than the stomach. Hammond says this seems to be the "favorite organ," and this is in accord with my own experience. The most obstinate vomiting, persistent flatulency and all the various distressing symptoms of indigestion, characterize a majority of the cases under my own observation.

The disturbances of function of other organs, like the heart, lungs, intestines, kidneys (with their inordinate secretion of limpid urine), the bladder with retention and incontinence of urine, the obstinate constipation of the bowels, are all familiar to every practitioner. The various forms of convulsions, attended with more or less loss of consciousness, bearing oftentimes a strong resemblance to epilepsy or tetanus, chorea or catalepsy, but distinguished from them by lack of consistency and constitutional disturbance, become the most distressing to witness and the most exhausting in their effects upon the nervous system.

The functions of the uterus suffer in every conceivable manner, from complete cessation of the menstrual flow for months at a time, alternating with the most frequent hæmorrhages, either very scanty (lasting but a few hours), or the most alarming in quantity. The pain and general nervous symptoms, as a rule, are most marked previous to the flow, oftentimes for many days, and these are so severe as to indicate with certainty the approach of the period even if the patient had no other definite means of knowing it. I think this an important diagnostic element. More rarely we find the exhaustion consequent upon the excessive hæmorrhages produces the well known hysterical convulsions, so familiar to every practitioner. The week preceding and following the flow (including it) is the time during which we may expect, and in fact find the most of these nervous phenomena. In many cases the remainder of the month may be comparatively free from any suffering whatever, especially in early life. As age advances, however, the periodical suffering leaves its impress upon the entire system. Not infrequently we find, as a result of the long continued nervous symptoms, marked changes in the facial expression, and a dull, listless melancholy rests upon a countenance once bright, animated and cheerful. The skin suffers especially, in many instances. Eruptions of various kinds, especially acne, appear, often to a degree that is disfiguring and loathsome to the patient. Alternations of color occur, so that in a few hours we find the most ghastly pallor, followed by a deep mahogany color, which may and in many instances does continue for several hours. In several cases under my own observation this latter symptom has been very marked, so that I now look upon it as a prominent diagnostic feature.

But enough has been said on the symptoms, and we pass to the etiology. Having already given you Sydenham's views on this point, I will add that of a more modern author and then give you some cases from my own experience, and there leave the subject.

All authorities agree upon one predisposing cause, as by far the most important—so important and predominating that, in my opinion, it becomes very highly significant, viz.: sex. Until within a comparatively short time hysteria in the male was not even talked or written about, and even accepting all that we know of the reported cases, they are trivial in character by comparison. Men have a nervous system, and it would be wonderfully strange if we did not sometimes find manifestations of disease that would very closely correspond with one or more of the multiform phases of what we have just described. Hammond says that in "332 cases observed by him in six years, 329 were females." Now it is not the object of this paper to attempt to enter into all the causes that have produced and may continue to produce hysteria in the female. The causes may be as various as the symptoms or the cases—I do not deny any cause that may seem to be well established by any mode of reasoning, whether derived from theory or practice. I simply propose to give you some instances derived from my own experience, selecting such cases, from quite a large number treated, as will illustrate a variety of symptoms, and results obtained by the methods employed.

Case 1.—Miss B., age 37, occupation a school teacher for many years. A woman of unusually fine culture and strong character in all respects. Had been particular successful in her vocation. Possesing an indomitable will, she had continued in her work as long as possible, but for about five years previous to coming under my care, had been unable to do any labor, either in teaching or otherwise. Her illness dates from eleven years before. During the first few years she suffered from impairment of menstrual function, alternating amenorrhœa and menorrhagia, severe dysmenorrhœa, with marked premenstrual pain for many days. Gradually the nervous symptoms became more prominent, characterized by insomnia, headaches, neuralgia in spine and sides, flushing and pallor of face, the dark-red spot in the centre of each cheek becoming a prominent symptom in the later years. She had consulted physicians early in her trouble, but only at rare intervals, and for five years previous to my seeing her, had been constantly under the care of the best she could obtain. Notwithstanding she continued to grow worse until she became a helpless invalid, unable to work physically or mentally, or even to move about. The mind became disordered to the extent that her friends proposed removing her to an insane asylum.

When I saw her she could get around her room and out of doors by holding on to the sides of the room and thus supporting herself, but her limbs seemed to have lost their use so far as supporting the body. She slept but little, and could not restrain herself from long attacks of crying. I think she had a strong suicidal tendency. As each menstrual period approached the symptoms were all aggravated, and during the period she was apparently oblivious of much that occurred. Knowing that she had received as good care and treatment as the State afforded, with apparently no relief, I soon became convinced that nothing but a cessation of the menstrual function offered much hope. I found sharp retro-flexion of the uterus, to which pessaries gave no relief, on account of the extreme sensitive condition of the vagina, preventing her wearing one for any length of time. There was also prolapsus of the right ovary, so that it could be felt in the posterior cul-de-sac. It was not particularly tender, however, and was movable and easily pushed up, so I did not attach special importance to the fact of displacement alone. Where

no pressure exists in these cases, I think we are not to regard it of so much consequence as it was formerly supposed to be.

On June 20, 1883, I removed the uterine appendages. I found very extensive cystic degeneration of each ovary, the right one being about twice the size. The tubes were partially closed, and had several small cysts adherent to them. There was a general passive congestion of all the parts removed. It was impossible to retain the uterus in place, so the retro-flexion continued, and I doubt not retarded the progress of recovery, which from that time commenced, and slowly, but surely, continued, growing better each month. All the prominent hysterical symptoms had disappeared at the end of the first year, and she began to enjoy the comfort of life. On the anniversary of the day of her operation, at the end of two years she writes as follows:

"Please permit me once more an expression of gratitude for the gain of these last two years. I can see that I am *stronger* than a year ago, and *much improved* from two years ago. I thank you very much and can always assure you of my best wishes." Within the past year she has grown still better. In many respects this was one of the very bad cases on account of the severe and obstinate retro-flexion.

Case 2.—Miss B., aged 24. From her first menstrual period until the day of operation, she suffered the most terrible agony sixteen days out of every twenty-eight. Twelve of these days of suffering were marked by epileptiform convulsions; pain of the most excruciating character in all parts of the body; the following four days had no less suffering, but were attended with flowing. The remaining twelve days of the month were almost entirely free from suffering of any kind whatever, but always at the end began the same round of troubles. Her friends became very anxious in regard to her, as she frequently threatened to take her own life. In this case there was partial prolapse of one ovary.

The operation for removal of tubes and ovaries was made, and the specimens showed a condition similar to the last, with the addition of a complete string of small cysts along the entire length of one of the fallopian tubes. They looked like a string of small beads. There was complete closure of both tubes. From that day until now, she has not had (to use her own language) "one minute of any kind of ache or pain;" she is perfectly well in all respects and the most grateful and happy person one would rarely meet, with no hysteria or other abnormal nervous symptoms.

Case 3.—Miss F., aged 17. Menstruation began at 15; from the first time to the last of a most violent character, both as to pain and quantity of flow—frequently flooding like a woman at childbirth—clots of immense size, and expelled with characteristic labor-pains. For several months prior to operation, she was not free from severe pain at all. Clonic spasms of a most frightful kind in lower extremities, necessitating the constant use of chloroform by inhalation for days together. The uterus normal in all respects—no fungus degeneration or evidence of unusual congestion—a curetting under ether revealed nothing abnormal—no enlargement of ovaries or tubes could be demonstrated. Everything in way of treatment was resorted to for a year without the slightest relief being obtained. The appendages of the uterus were removed, and each ovary was found so completely destroyed by inflammatory action and cystic degeneration that, as my notes have it, "scarcely any normal tissue left in either,"—"tubes closed and cysts along the course of them."

For four weeks she suffered no pain at all, scarcely requiring an opiate; at the end of that time she got out of bed herself, sat up nearly all day, got pelvic cellulitis, from which she suffered more or less for several months, which ended in abscess opening through the uterus into the vagina. From that time she began to recover, and is now as well apparently as any one. There was never any return of the spasms or general neuralgia, so constant before the operation. From a helpless, hopeless victim of terrible suffering, she is now a comfortable, useful young lady. In this case there was an entire absence of any of the usual developments at the period of puberty—no enlargements of the breasts—no hair at all on the mons veneris, or external genitals. I think the unsexing in this case could not have been very much.

Cases 4 and 5—So closely resemble each other, and being of another type from those described, I give them together. Miss L. and Miss N., of about the same age, 24. Miss L., temperament, family and personal, nervous. Four sisters—all nervous—three have painful menstruation. Menstruated first at 13—not regular first year—nausea, pain in back, headache and pain in the lower limbs; length of period five or six days. Had measles four and a half years before the operation, since which has been suffering much at periods—flow of but one day—within the past two and a half years the flow has been followed by nausea and vomiting nearly every morning for two weeks. Hysterical symptoms of a painful convulsive character at each period—screaming, crying, globus, etc. Never had hysteria before measles. Has been under the best medical care she could obtain, with all the opportunities of best hospital care—no relief whatever. I found a very sharp anti-flection at cervico-corporeal junction—made forcible dilatation, followed by the usual local treatment of packs, douches, rest, etc.; no relief. Operation showed extensive follicular cystic degeneration of both ovaries, with atheromatous closure of tubes.

Miss N. so closely resembled the last, both in having measles as a cause of aggravation of symptoms and antiflexion, that a history of one is that of the other in many respects. The flow was preceded by many days of severe suffering, which became hysterical convulsions during the flow, which lasted two weeks. The character of pain and amount of flow, at each period, resembled a miscarriage of the severest kind; dilatation afforded no relief; no fungus growth that could account for flooding. After several years of treatment with no benefit, the operation of removal of uterine appendages was made with entire relief to all suffering. From being a chronic invalid she is now entirely well and able to perform

any kind of labor. Miss L. was also completely relieved from suffering, but has not yet regained her strength so as to be able to be about, although she is improving rapidly, considering her very anæmic condition previous to operation.

The pathological condition of the tubes and ovaries were similar in Miss N.'s case, except that there were two or three cysts of the tubes as large as peas.

Case 6.—Mrs. F., age 30, married seven years, had three children within four years; never pregnant after that, although no means were used to prevent it. Three years ago began to have nausea and vomiting, which in six months became a constant thing after taking food. She and her husband believe that for the two years previous to operation she did not retain a spoonful of any kind of food. She became almost entirely bloodless, and so weak that she would frequently fall to the floor, when about her work, in a hysterical convulsion, that would sometimes last for hours. Symptoms aggravated before and during menstrual period.

After two years of treatment under my care I became convinced that only a cessation of menstruation would give relief. For a few months she tried various modes of treatment, and finally consented to the operation. In three weeks she was able to return to her home. From the day of the operation she did not vomit once, but was able to eat everything she desired. Previous to the operation her finger nails had become entirely dead, flattened, clubbed and turned up at the ends, so as to cause the ends of the fingers to bleed and be constantly painful. Since the operation everything has changed. she is a strong, florid, fine healthy woman as the city affords, taking entire charge of her family and riding on horseback and driving every day. The left ovary was twice the normal size and contained a cyst holding half a drachm.

A similar case to the last, so far as the constant vomiting is concerned, I operated upon two months since, and so far as we are able to judge at this time the result is equally good. Married sixteen years, a great sufferer from dysmenorrhœa fourteen years, during which time she has been under good treatment from various intelligent physicians, never pregnant. Alternations of amenorrhœa and severe flooding, with repeated attacks of pelvic peritonitis. Tubes and ovaries adherent throughout their entire length. I had great difficulty in detaching them, but finally succeeded. The ovarian tissue was entirely destroyed by inflammatory softening and exudate. tubes impervious and like whipcord, a chronic partial congestion in all the pelvic organs. Severe and obstinate vomiting followed operation for more than two weeks, accompanied and doubtless largely caused by peritonitis. Now she is taking a good quantity of nouring food with impunity, and is recovering very rapidly.

I have selected these two together, as they illustrate one phase of the reflex symptoms.

In another case Miss L., aged about 30, hysterical catalepsy had been a marked symptom for several years. She would lie for weeks at a time utterly oblivious of everything and every one about her. At intervals rigidity of body would come on, lasting for hours. Neither drugs or other means of treatment gave any relief. She had all the benefit of hospital care and attention for months at a time. There was marked retroflexion with complete retroversion. Replacement and support would relieve for a short time, but nothing permanent came until the operation of castration was made, since which she has never had the slightest return of any one of the symptoms. Extensive follicular degeneration of ovaries was found. Insomnia, vomiting and indigestion had been prominent in this case. She eats, sleeps and digests perfectly, and is now a healthy, well nourished young lady.

I have not time, even had I the courage, to trespass upon your patience to report any more cases. I have now made the operation twenty-five times, and each case has a certain amount of professional interest. Four or five have been made for uterine fibroids, mostly for excessive hæmorrhage, with complete relief to the hæmorrhage. One case the removal was made hoping it might stop the growth of a fibroid and relieve the suffering due to pressure. There has been no relief, however. I think cases like this should have hysterectomy. The cases reported were selected as types of the various phases of hysteria. Among the cases not reported are types of the same phases, and with as good results.

In only one instance I was unable to remove the entire substance of the ovary and tube, and this is the only instance of continued menstruation. She suffers very much at these periods, and I think I shall make another trial to finish it. In no case have I failed to find well-marked disease of the appendages, either strong evidences of former attacks of oöphoritis, as indicated by exudate and other organic changes in the substance of the ovary, or enlargement and stenosis of the fallopian tube. In not more than four instances have I been able to make a diagnosis by the touch, but have in all the others operated entirely for the relief of the hysterical symptoms. With the single exception named, in every case great relief has followed, and with two exceptions, I have no reasonable doubt that a complete cure will result after a reasonable length of time. We cannot expect that a nervous system that has suffered for years will at once resume its normal functions. The wound is tender after the thorn has been removed. Effects do not immediately cease on removal of the cause; women suffer more or less from some disorders of the nervous system at the natural menopause; similar symptoms naturally follow an artificial one.

I do not by any means claim that all hysterical symptoms are due to diseased uterine appendages; but I am sure, from this experience, that in these cases they stand in the relation of cause and effect. I know that in a very large majority of these cases these women have been suffering invalids for years, and that all modes of treatment have been of no avail. From being burdens to themselves, and dependent upon their friends for help, they are now comfortable and independent. Through long suffering and in

many instances from lack of sympathy for their suffering, life has lost its charm and they would gladly have rid themselves of it, while now they are glad to take their places as useful members of society.

I have never operated in any case where I have not been well satisfied, either from my own care of the case, or from that of intelligent physicians, that further treatment in any other manner would be of no avail. I have no regrets at the course pursued up to the present time, and I know of no case where the patient regrets the step she took.

In answer to the objection that it unsexes the woman, I have only to say that in all the married women, they either have never been pregnant or have not since the beginning of their most serious symptoms, even though several years have elapsed since their last childbirth.

Dr. W. Gill Wylie, professor of gynecology in the New York Polyclinic, in reporting thirty-seven operations for removal of the uterine appendages, in the *Medical News* of March 27, 1886, says: "I have yet to see a well-marked case of hystero-epilepsy or decided hysteria operated upon, in which the ovaries were not found in a state of cystic degeneration or very much atrophied. And these are nearly always associated with an imperfectly developed or atrophied uterus." And in the same paper he says, what I have found true in several cases, "that in those cases where the subjective symptoms were chiefly reflex and of a nervous order, the *immediate* results were by no means always satisfactory, although many recovered after being seemingly unimproved for several months."

When we take into account how little has formerly been done in these long-standing reproaches to the profession, we can certainly get much comfort from the results in his cases. On this point he says: "It is yet too soon to speak positively about the results of the operation in all classes of cases, but I can say without hesitation that in those cases where the subjective symptoms were actual local pain and physical inability to go about without causing persistent pain —and almost all the cases of pyo-salpinx would come under this head—the results were good and satisfactory to the patient and physician. In many cases the relief from pain was gratefully acknowledged at once."

This is so thoroughly in accord with my own experience that I need only to quote it as applicable in a majority of my own cases. The experience of Battey and Tait, who are deservedly the pioneers in this department of gynecology, is now so well known to the profession, that it would be supererogation at this time to allude to it in detail. It is no longer a question with them what shall be done with this large class of sufferers; by hundreds of cases they have demonstrated the utility of the procedure.

The very extensive and valuable papers relating to to this and kindred subjects, by Mary Putnam Jacoby, show that what at first glance may seem to be only slight changes in the ovary and tubes, are really severe structural organic changes, that without doubt have destroyed their function.

If I were asked to formulate my views, derived from my own experience and that of the men who have done much more in this direction, I should sum up about as follows:

1. That these (so-called) hysterical symptoms occur almost exclusively in women. That whenever any of them do occur in men they are much less in degree, even if they do not differ in kind.

2. That it is fair to presume from the first proposition that it is due to disease of some organ or organs peculiar to women.

3. That they are not due to disease of the uterus alone, for when all apparent abnormalities of the uterus are corrected, the symptoms, very often, are not in the least relieved.

4. That all modes of treatment, other than operation, have failed to cure, and in most instances have not ameliorated, the symptoms, even where the disease was believed to exist in the uterine appendages.

5. That the large majority of all cases operated upon have been entirely cured of the symptoms for which the operation was made, and the remnant have been relieved and are continuing to improve.

6. That it is impossible, in a majority of cases, to determine by the touch, disease of these organs that will produce the symptoms alluded to.

7. That one can by these symptoms alone make a sufficiently satisfactory diagnosis to warrant the operation.

8. That after correction of all well known and clearly diagnosticated uterine troubles, these symptoms are not relieved, we are justified and required, for the cure of our patient, to recommend this remedy.

9. That the operation does not in any case destroy the sexual desire, or in any way unsex the woman, except so far as it may prevent further childbearing.

10. That in a majority of cases requiring the operation the woman is already sterile.

11. That in my own experience the specimens removed have been found so changed by inflammatory action as to be cirrhotic, or otherwise destroyed, either by softening or cystic degeneration of both ovaries and tubes, with very frequent stenosis of the latter.

12. That a fatal result from the operation is extremely rare, if it is carefully performed and closely and intelligently managed as to the after treatment. In the twenty-five cases operated upon there has been but one death.

It is certainly time that the profession were done with the old idea that a hysterical woman is only to be laughed at, and treated as one who deserves no consideration at our hands. Thousands of women, of the strongest character, have been cruelly and shamefully treated by their friends, even while they were suffering the most excruciating agony, and simply because the profession has given countenance to the theory that "she could prevent it if she chose," that she was "only hysterical." We cannot expect more from the laity than we teach them. Instead, let us each strive to "contribute something to the science of pathological anatomy" out of this mass of distressing symptoms.

ORIGINAL ARTICLES.

THE DANGERS OF KISSING.[1]

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For more than two years past I have had in mind the preparation of this paper, and much of the material has been collected during that period. I have only recently, however, examined the literature of the subject, and was greatly surprised to find it so meagre. None of the ideas advanced in this article have been borrowed from this literature, as they were conceived before this was examined; but I do not claim that they are specially new, however original they may be.

My first purpose was to discuss the subject from a purely professional standpoint. In a late number of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION[2] the editor commented on "Compulsory Kissing," basing his remarks upon an article from the pen of Eleanor Kirk,[3] in which she undertakes to defend the parent who has the courage to oppose this reprehensible habit. After reading these two papers I determined to broaden the scope of this communication and cast it in a mould more for the general reader than is consistent with a purely professional audience.

As I said before, I was surprised at the meagreness of the professional literature upon this subject. There may be isolated reports of cases of diseases transmitted by kissing which I have not found, but the library of the Surgeon-General U. S. Army contains only two works bearing on the subject, both of which were published in the early part of the eighteenth century.

These are in the Latin, and I am indebted to my friend, Dr. Kolipinski, for valuable assistance rendered in their translation. From the following brief abstracts may be gathered the general drift of these writers, and I also add one or two notes from others who have mentioned the fact of a disease being communicated by kissing.

Ermelius[4] says that reason and experience prove that the saliva is especially calculated to be a carrier of the contagium. The "molecules" (poisonous germs) are hidden under its viscidity. It may contain a great number of "*aireo-ætherial particles*" of a benign or malignant nature, as hydrophobia.

Forestus[5] has shown that kissing has been the source of contagion in syphilis.

Hentschel[6] contends that the "*miasms*" of various diseases can be carried with kisses—scorbutic, venereal, purpuric, petechial, scabious, leprous, pestilential, and all other species of contagion in which the causes are subtile. Not only the volatile substances which may be conveyed to others in respiration, but also the saliva and the vapor and exhalations of the mouth may be transmitters. Therefore, ulcerous infection, salivary tumors, cancrum oris, scurvy, syphilis and phthisis may likewise be communicated.

Paullini[1] bewails the transmission of scurvy among German children by kissing as a salutation, a custom of England, Holland and France.

Oertel[2] reports two cases of diphtheria contracted by a kiss, the membrane appearing on the second day.

Kissing is a custom that not only prevails universally among the human race but also in some of the lower animals. There is a vast difference, however, in the exercise of this custom. In the former the kiss is given to almost any submissive person, while in the latter it is only employed as one of the means of expressing affection. The truth of this latter proposition is well illustrated in the bird which will frisk among its playmates without being tempted by their charms to give up the kiss which is reserved for its mate alone. It may be said that the animal looks about, finds its mate, bestows its kisses, propagates, raises its offspring and, finally, divorces itself, thereby gaining numerous mates, but we know that many animals, if undisturbed, will continue with the same mate and raise successive broods, and will not seek a new one each season. There is this difference between the animal and the man: the one mates before it kisses, the other kisses before he mates.

Reasoning from analogy the conclusion that kissing was originally intended to give utterance to the affection is reasonable. How far this intention has been perverted by man is a problem not easily solved; and yet the solution would seem easy if one were allowed to reason from the promiscuous and broadcast kissing of every-day life. Instead of being an expression of one of the noblest attributes of man, it has almost degenerated into an insincere, unmeaning and common-place salutation.

When kissing is confined to the same sex there is a great difference in its sincerity. In some European countries the custom is for men to kiss one another on the forehead or cheek; but in this country the practice prevails only to a very limited extent; and only then as an expression of the warm affections between father and son or brother and brother.

Between females the act has become so common that it is hardly more than a ready and easy mode of greeting, having no greater meaning than the conventional hand-shaking.

When kissing is extended to the opposite sex I must accord to woman the credit of being the more cautious upon whom this index of devotion is bestowed.

All this simply shows that kissing is extensively and injudiciously practiced by those who have arrived at the years of discretion, thereby setting a bad example for those of less mature judgment. There can be no question that certain transmissible diseases are communicated by promiscuous kissing among adults, and it is fair to assume that the same diseases are communicated to children in the same way. Adults are supposed to be capable of judging for themselves in such matters and it would be folly in me to attempt

[1] Read at the meeting of the Washington Obstetrical and Gynæcological Society.
[2] September 19, 1885.
[3] "Babyhood," September, 1885.
[4] De osculo ovim philtri exserente. Inaug. Dis., 1719.
[5] Ibid.
[6] De Osculo Morbifico et Mortifero, 1746.

[1] Ibid
[2] Ziemssen's Cyclopædia, Vol. 1, p. 595.

to restrict them in exercising these privileges; but as they are the guardians of the children this paper will be devoted to pointing out to them some of the dangers to infants and children of promiscuous kissing, and the suggestion of a few remedies for its suppression.

From birth to the beginning of sexual evolution, perhaps, the child is exposed to moral, mental and physical dangers from promiscuous kissing. Up to the latter age kissing is not a matter of choice, but an act made compulsory by the kisser or by someone having the supervision of the child. Indeed the infant is the passive victim, and it is not until the third or fourth year that the child repels the aggression. Then, it too frequently happens that in spite of its disinclination, it is forcibly compelled to submit. With increased strength comes a growing aversion to kissing, coincident with the rapid growth and physiological development of childhood, which seems to be one of the many wise provisions of nature for protecting the delicately constructed and rapidly changing organism from the numerous extraneous causes of disease.

It would be interesting to follow a baby from the time it is placed in its perambulator and receives the maternal kiss until it returns later in the day, in order to note the peculiarities, both mental and physical, of the numerous persons who stop to kiss it. To gain some idea of the mixture and the probabilities of the transmission of disease one need only sit in one of our large parks on a bright sunny morning and study the physiognomies of the strangers who kiss the baby as it lies in its carriage. At this time there are not unlikely a dozen maids with as many or more infants and young children congregated there. These custodians extend the matutinal salutation by kissing the babies all round. Among a dozen such people it is not improbable that some benign or malignant disease may be found. In a former contribution[1] I pointed out the difficulty in selecting wet-nurses and the danger to the infant in being wet-nursed. I then claimed that we could not vouch for the health of any woman because of the latency of many diseases. With equal weight, I believe, the same argument may be advanced respecting the selection of nurse-maids. Mothers are afraid certain transmissible blood diseases may be conveyed to the child through the wet-nurse's milk, and they want their family physician to assume the responsibility of her selection. It may not have occurred to these watchful mothers that the same blood diseases can be conveyed by other liquids of the body, and this, perhaps, may account for the absence of the doctor's advice in choosing the maid.

If it be true that tuberculosis is due to specific germs which pervade every portion of the body and circulate in every fluid, then the child's chances of being inoculated by the saliva, in kissing, are as great as by the milk in nursing. So impressed am I with this mode of inoculation, that I usually inquire into the maid's history whenever I am called upon to treat an eruptive disease of doubtful character in a child.

Not long since I observed, lying in a carriage, a beautiful baby which indicated every evidence of wealth and high social standing. Pushing this vehicle was a girl whose facies bore evidence of the secondary symptoms of syphilis. Would it have been surprising if the virus had been transferred by a kiss to this child? On the contrary, it will be marvelous if it escape. The merest tyro in medicine would assume the responsibility of discharging such a maid.

Some time ago a fellow-practitioner reported the case of an estimable young lady who had a chancre on her lip. Admission confirmed the opinion of her physician that the man to whom she was betrothed had contracted the disease and, unfortunately, had inoculated her lips in kissing her. Suppose this man had kissed one or more of this dozen babies—a thing not at all improbable—and they had caught the disease? The result might have been the same, but would the source of contagion have been as easily discovered?

Mechanical injuries may also be caused by kissing. When it is remembered how delicate the infantile structures are, the wonder is that they so often escape injury. May not some of the misshapen mouths and distorted features be traced to too much kissing? One need only reflect upon the powerful suction sometimes displayed in such performances to realize its dangers. There is a well-authenticated case in which the membrana tympani was ruptured by kissing the external opening of the ear, undoubtedly due to suction, and I have seen an ecchymotic spot on a child's cheek caused by prolonged suction in kissing it. Although I have not seen any injury to the eye positively traceable to this cause, nevertheless, in my opinion, its delicate structures could easily be injured in this manner.

These perpetual baby-kissers are not particular where they ply their vocation. The mouth and face are the sites most frequently selected, but other parts of the infantile anatomy seem to answer the purpose equally as well.

But aside from these physical injuries, there are moral ones as well in childhood. At this time of life the disposition of the child is being formed, and it should be the aim of every parent to train it so as to be gentle and kindly. As the child grows older kissing perhaps becomes obnoxious to it, yet some parents there are who will force it to submit to the distasteful ordeal even to the point of inflicting corporal punishment for refusal. How many of my readers can recall those happy juvenile days that were made miserable by punishments inflicted because they refused to be kissed by some repulsive visitor. Who of us but can revert to those moments of torture when we were called from our games to be kissed? I venture to say that many of my readers have undergone the child's experience, and have run at the sight of a visitor because remaining meant kissing. Were you punished for escaping? If so, do you still wonder that when children are forced to these distasteful performances they sulk and pout, fret and cry, run and hide, and disobey their parents? If you will look about among your acquaintances you can no doubt pick out not a few the thought of kissing anyone of whom would cause your appetite to vanish and the natural quietude of your stomach to be disturbed; and yet would you compel a child to

[1] How Shall We Feed the Baby? Archives of Pediatrics, April, 1885.

submit to an act distasteful to yourself, as if its olfactories were less acute and its delicate stomach less easily offended?

There are many diseases met with in children which I believe are communicated by kissing. Frequently we see diseases that are not classed as contagious, and yet all the children in a family have them. Probably in such a case the disease was transplanted in kissing, and this opinion seems reasonable when we observe that such diseases usually make their appearance on the face or lips. Among this class may be mentioned herpes, eczema, and ulcerative stomatitis. Most parasitic diseases are conveyed by close contact only, and their frequency in childhood may, not improbably, be attributed to the frequency of this vicious custom. I have no doubt that in isolated cases of eruptive diseases, when every one is puzzled to find the origin, inquiry might reveal the fact that the child was inoculated by the germ from the lips of a distant relative, friend, casual visitor or stranger who had lately kissed it.

As the child approaches puberty a marked difference in the sexes is noticeable. The girl becomes wary of the caresses of the boy, and this I believe to be the result of instinct rather than of reasoning, parental precept or education. With this period the innate modesty peculiar to woman becomes manifest. She refuses to romp and play childish games, and assumes more dignified airs. No one but the girl who is undergoing this physiological change can properly appreciate the perplexing difficulties encountered in adapting her mode of life to the requirements of her age. She must restrict the heretofore privileged bachelors by drawing the line of their salutations at hand-shaking. By thus asserting her womanhood she not only offends these sage visitors, but also, perhaps, establishes a reputation among her eligible spinster relatives for haughtiness, prudery and general disagreeableness.

At this critical age it is entirely different with the boy. He who was admonished or perhaps chastised by his parents for being shy, diffident or unwilling to be kissed, suddenly astonishes the family by an entire change of disposition. He too begins to feel the importance of his age, and, unlike the girl, takes every advantage the opposite sex will give. Boys at this age are very susceptible to the flattery of escorting young ladies about, and are quick to perceive the advantage of being accommodating and polite. They enjoy the company of ladies who consider them little boys, and for their good behavior and politeness reward them with a kiss. When such freedom is given a boy at such a critical and susceptible age may we not conclude that the consequences will be harmful? If women would adhere to the strict *regime* they adopt upon entering their "teens," and not depart from it to reward the civilities of youth, it would do more than any other restriction to correct these abuses of kissing.

One of the most fortunate reformations of childhood would be the abolition of kissing games. I think the custom is gradually dying out. Only a few years ago a party of children could not amuse themselves without spending most of their time at these games. If a child were independent enough to refuse to join in such pastimes it was either "shamed" into it or adjudged disagreeable. Ringworm is a very common disease among school-children, and its most frequent seat is the face. These games used to be one of the most common amusements of children during their play-hours at school, and I am convinced that the rapid spread of this disease could have been directly traced to the promiscuous kissing in these games. I also believe that if the spread of the contagium of many other local diseases of the face and scalp could be traced it would be found to originate in the same cause.

Many of the vices of later childhood may, I believe, be caused by early and undue excitement of the undeveloped sexual organs, caused by this vicious custom of promiscuous kissing. It may be contended that no physical injury can be done at this age on account of the imperfect procreative functions; but we know that repeated excitation of any organ hastens its development, and that there is such an intimate relation between the lips and the sexual organs that excitation of the former by kissing must necessarily cause excitation of the latter, and consequent premature development. Some may claim that the child's sexual organs are not excited by kissing, but the facts do not sustain this opinion, and, on the contrary, demonstrate its error. I firmly believe that frequent kissing induces precocious puberty, which we all know is injurious to the moral, mental and physical well-being of the child; and I have no doubt that hyper-excitation of the passions of the precociously developed child is the frequent cause of diseases incident to unnatural irritation and congestion. I have in mind a case of serious irregularity in menstruation, in a girl of 14 years, which I was clearly able to trace to its origin in this pernicious custom.

In attacking such a universal custom with the hope of offering a remedy for it I am conscious that it is much easier to suggest a specific for the cure of a great social evil than to apply it. The suppression of the kissing salutation must be a matter of education and will not be an immediately accepted reformation. We cannot hope that all the parents of to-day will promptly see the possible dangers in promiscuous kissing. It would be ridiculous to expect that any family would exclude kissing from its methods of salutation. Indeed, under ordinary circumstances, it would seem unreasonable in a mother to refuse to allow members of her own family to kiss her child; and yet it would, undoubtedly, be fully justified by all reasonable people if she should insist upon it being exclusively a family privilege; and even a member of the child's own immediate family who has either a benign or malignant disease of a contagious nature should unhesitatingly be excluded from this privilege if the mother desire to secure the safety and health of her offspring.

Under no circumstances should persons whose histories are either doubtful or unknown be allowed to kiss children. Nurses should be carefully instructed in the dangers of the custom, and should be strictly cautioned to exercise vigilance in order to protect

the child from the kisses of strangers. Neither should they be permitted to indulge in the habit.

When the child is old enough to appreciate the dangers it should be taught to respectfully decline the proffered salutation. If it were taught to refuse every one then there would be little fear of offending sensitive people. If a child seem unwilling to be kissed the parent should never compel it to submit; and for disobedience in this respect it should never be punished. It has a reason for its refusal, although it may be incapable of imparting it. Children should not be encouraged to play kissing games.

As the child approaches puberty there should be a freer communication between it and the parent. The latter should point out the approaching physiological changes and their attendant dangers — prominent among which I place kissing.

To correct the abuses of kissing will not be an easy or enviable task for the mother, but if she will begin to correct them soon enough it will not be long before she will be able to eliminate this almost vice from the category of the probable causes of disease.

In offering the above suggestions to the thoughtful consideration of this Society I have no desire to achieve martyrdom in the eradication of what may be called one of the great social evils. I have only aimed to point out a few of its many dangers which are well known to medical men, and I trust that it may be the means of inducing the mothers of the coming generation to take the initial step towards curtailing if not wholly suppressing this insincere, commonplace and dangerous mode of salutation.

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MEDICAL PROGRESS.

INFLUENCE OF KAIRIN, THALLIN, HYDROCHINON, RESORCIN AND ANTIPYRIN UPON THE HEART AND BLOOD-VESSELS.—In a series of experiments on this subject, DR. H. G. BEYER draws the following conclusions:

Kairin.—The conclusions which we may draw from experiments on the frog's tongue with kairin are: (1) that it produces dilatation of the capillaries and veins, which dilatation much exceeds that of the arterioles, which latter is sometimes preceded, sometimes followed, by an abnormal contraction; (2) that it causes a slight acceleration in the current in the arterioles and a slowing of the flow in the small veins.

All the experiments made with kairin on the heart (nine in number), show the great weakening effect it exerts upon the contracting power of the cardiac muscle. In some cases in which this organ happened to be in good working order, and low venous as well as arterial pressure was used, a very slight but transient increase in the rate, and even in the force of its contraction was noticed when the dose was not too large; but this was always quickly followed by signs of general weakening. The entire organ, then, becomes much enlarged, occupying from twice to thrice its normal volume, its contractions become peristaltic, incomplete, and sluggish; the auricles keep well filled with blood, never emptying themselves completely. As a rule, the auricles are much sooner affected and recover much later than the ventricle. Under these circumstances the rate of the heart is much decreased, the amount of work done is sometimes increased, owing to the relaxed condition of the ventricle, but more often decreased, and, finally, diastolic arrest ensues. The heart presents the color of kairinized blood, which, however, again disappears, but, after repeated kairinization, it becomes permanent—in other words, the color of the blood has become the color of the muscular substance of the heart. From this condition the heart was never found to recover: the organ seems as if gelatinized, moves *in toto*, shrinks, and contracts little by little, responds to neither mechanical nor electrical stimulation, and is to all appearances dead. This condition of the heart may almost at once be produced by injecting a two per cent. solution of kairin into its substance, by which arrest in systole is produced.

The temporary diastolic cardiac arrest which kairin produces is most probably due to its stimulating effect on the terminal filaments of the pneumogastric, and the vascular dilatation to a similar influence on the ganglia of the vaso-dilators. Kairin must also be considered a muscle poison.

From the results of experiments, it is quite clear that kairin reduces temperature, both by diminishing heat production and by increasing heat radiation. The distinctive influence it exerts on the red blood-corpuscles, however, and the weakening effect upon the heart, render its employment objectionable and dangerous.

Thallin.—Summing up the results of experiments with thallin upon the heart and blood-vessels of the frog and terrapin, we notice, first, the striking similarity which exists between it and kairin, the only difference, in fact, being that thallin has a much less injurious influence upon the ventricle, the auricle and blood vessels being equally affected by both drugs.

The temporary diastolic cardiac arrest produced by both these drugs, we are inclined to attribute for the most part to their stimulating influence on the terminal filaments of the pneumogastric. The dilatation of the blood-vessels, most probably, is produced by their stimulating effect upon the ganglia of the vasodilators. The subsequent contraction of both heart and arterioles is due to their direct action upon the muscular substance.

Thallin, like kairin, reduces temperature by diminishing heat production, and by increasing heat radiation; as an antipyretic it is less dangerous, but no less objectionable, than kairin, for while its effect upon the ventricle of the heart is less depressing than that of kairin, its influence upon the blood-corpuscles is sufficient to condemn it.

Hydrochinon.—From all the experiments made with hydrochinon on the heart and blood-vessels of the frog and terrapin, we must arrive at the conclusion that it reduces temperature mainly by increasing heat radiation, owing to its influence upon the veins, which it largely dilates, and the capillaries and arterioles, which it also dilates, though to a less extent. Through its influence upon the red blood-corpuscles

it probably also diminishes heat production, by an impairment of their respiratory capacity.

The singular but noteworthy fact, observed under the microscope on the frog's tongue and elsewhere, that kairin, thallin, and also hydrochinon change the color preferably of venous blood, seems to point to a peculiar affinity of these substances for such blood, and it is not at all unlikely that the presence of carbonic dioxide in venous blood is the cause of its chemical decomposition underlying the appearance of this phenomenon. The peculiar coloring principle thus set free diffuses itself through the walls of the veins into the neighboring tissues.

When we now compare the action of hydrochinon upon the heart and the blood-vessels of the frog and terrapin, with that of kairin and thallin, the result shows that hydrochinon affects the ventricle of the heart still more favorably than thallin; the auricles, however, are as promptly paralyzed by hydrochinon as they are by thallin, and even kairin. All three largely dilate the veins, for which they show a decided preference, and they also dilate the capillaries and arterioles; the dilatation of the latter, however, is either preceded or followed by an abnormal contraction, especially noticeable when the drug was injected hypodermatically. On hypodermatic injection of all three of the drugs, slight muscular spasm may be seen on the frog's tongue.

The action of hydrochinon, then, being similar to that of kairin and thallin so far as the heart and blood-vessels are concerned, the explanation of its action must, in like manner, be similar. The peculiar affinity of kairin, thallin, and hydrochinon for veins and venous blood cannot be explained by these experiments.

Resorcin.—A consideration of the results of the experiments leads to the conclusion that resorcin reduces the temperature by increasing heat radiation by the dilatation it produces in the capillaries and veins, especially the latter. The same quite remarkable preference for the venous side of the heart and vascular system is shown by resorcin in nearly the same degree as by thallin and hydrochinon. Resorcin paralysis the auricles in doses which seem to improve rather than impair the contracting power of the ventricle, and it largely dilates the veins, while the arterioles are affected but very slightly.

As is the case with kairin, thallin, and hydrochinon, resorcin reduces the rate of beat of the heart probably by a stimulating influence on the terminal filaments of the pneumogastric, and dilates the vessels through a similar influence on the ganglia of the vasodilators. The tonic effect which it has upon the ventricle is most probably due to its direct action upon the muscular substance of the heart. We have, so far, no explanation of the difference in the action of these drugs upon the two sides of the heart and vascular system. Nevertheless, the fact remains that all of the drugs so far considered possess this property nearly to the same extent. The only difference regarding their influence upon the heart lies in the ventricle. Kairin and thallin, in small doses, exercise but a *temporary* tonic influence over its contraction; hydrochinon and resorcin a more permanent one. They all quickly paralyse the auricles and lower the tone of the walls of the veins. The natural consequence is that a much greater quantity of blood will be contained in the veins than in the arteries, and its passage from the veins back into the ventricle is greatly impeded, owing to the paralyzed condition of the auricles. Collapse, therefore, ensues; not so much from failure of the action of the ventricle, as from the danger of *bleeding the animal to death into its own veins*, to use the words of Ludwig.

Antipyrin.—Antipyrin, in very small doses, injected into the lymph-sac of the frog very slightly contracts the arteries, but dilates the capillaries and veins; in large doses, applied directly to the surface of the tongue, it gives rise to extensive dilatation in the veins and also the capillaries; a 1 per cent. solution of it applied to the tongue of the frog will, after a short time, cause coagulation in all the superficial blood-vessels. The manner in which antipyrin reduces temperature is purely by increasing heat radiation, owing to its extensively dilating the veins and capillaries; but what stamps it is an excellent antipyretic is that, besides dilating the veins, it also has a tonic influence on the heart and slightly increases arterial pressure, or at any rate does not cause a diminution of the same. It has, moreover, no injurious influence on the blood or the muscular tissues, and strengthens the auricles.

The objection to the employment of kairin and thallin as antipyretics is from the fact that they cause heart paralysis, especially affecting the auricles, in doses only slightly larger than are sufficient to produce a lowering of the temperature. But this objection becomes an absolute danger when we take into account the destructive influence upon the blood corpuscles and tissues generally.

Hydrochinon and resorcin, although not exerting the same weakening and directly paralyzing influence upon the ventricle of the heart which is peculiar to kairin and thallin, both paralyze the venous side of the heart, viz., the auricles, and greatly lower the tone of the walls of the veins. The extra amount of blood, therefore, which is driven into the veins through the increased action of the ventricle, is only with great difficulty returned to the ventricle, and here the danger is not so much from failure in the power of the ventricle as in the case of kairin and thallin, as from the danger of *bleeding the animal to death into its own veins.* The intense visceral and especially pulmonary congestion found on post-mortem, by Dujardin-Beaumetz, and others, in animals killed by resorcin, seems to confirm this view of the matter.

Antipyrin, though largely dilating the veins, increases the power of contraction of both auricles and ventricle, and has no injurious influence upon the blood nor the muscular tissues, and therefore possesses, indeed, all the good qualities of a perfect antipyretic.—*American Journal of the Medical Sciences*, April, 1886.

SUCCESSFUL SPLENECTOMY.—At the meeting of the Royal Medical and Chirurgical Society, on April 13, a paper by MR. KNOWSLEY THORNTON was read, which was of remarkable interest, as embodying an

account of the first successful case out of twelve operations for the complete removal of the spleen, which have been performed in England. The operation was performed almost exactly two years ago, on April 22nd, 1884, for the relief of a painful and rapidly growing splenic tumor, in a girl of 19. It proved to be one of the multilocular cysts, which are very rarely found in the spleen, and which had reached a dangerous stage; for the walls of the cyst had in one part become so thin, as to be quite transparent, and rupture might have followed any trifling accident. The specimen was shown to the Pathological Society, soon after removal. No traces of any hydatid orgin could be discovered. The patient was anæmic, but the increase in the proportion of colorless corpuscles was not great, and there was no enlargement of the thyroid or other glands. The operation was strictly aseptic. There was a speedy recovery, interrupted by a relapse in the third week, with some fever and phlebitis; but, in seven or eight weeks, good health was re-established, and what is very important to notice, has been continued up to the present time; so that the physiologist has a rare opportunity of studying the working of the human economy, when deprived of one of its large visceral organs, whose functions, in spite of much study, remain somewhat enigmatical. Mr. Thornton was able to give the very satisfactory report of his patient, that, after recovery from the immediate effects of the operation, she had spent nearly two years in comfort, and, apparently, normal health; into any more minute physiological points he had had no opportunity of entering. In the very interesting tables of previous operations, which he presented along with his paper, there were thirteen for simple hypertrophy, of which nine recovered. The first splenectomy in England, that by Sir Spencer Wells, in 1865, was for simple hypertrophy; but the patient died in a week, with a large thrombus in the heart. M. Péan was quite successful in 1867, in the removal of a spleen containing a very large cyst, which held more than five pints of viscid fluid. That was the first success since a rather doubtful case by Ferrerius, in 1711, and by Zaccharelli, in 1540. In the many cases, now reaching a total of about twenty, in which the operation has been recorded, as having been resorted to in cases of undoubted leukæmia or leucocythæmia, it has invariably been fatal; and Mr. Thornton was no less emphatic than other authorities, in its condemnation, under such circumstances; and, though these, unfortunately, are by far the largest number of cases in which great splenic enlargement is associated with fatal disease, yet a small residuum remains of cases of great pain, such as sometimes accompanies wandering spleens, and sometimes of great danger, as in cystic disease, in which the advances of abdominal surgery offer us some hopes of permanent relief.—*British Medical Journal*, April 17, 1886.

Intravenous Saline Injection in Post-Partum Hæmorrhage.—The value of intravenous saline injection in metrorrhagia is warmly advocated by Dr. F. Weber in the *St. Petersburger medicinische Wochenschrift*. Its superiority over transfusion of blood, human or animal, consists partly in the simplicity of the apparatus required. All that is needed is an Esmarch's jar, with a glass reservoir, a canula, and some India-rubber tubing. The operation is as follows: Five litres of a 6 per cent. solution of common salt is prepared with distilled water of the temperature of the body. If the veins be so collapsed as to be invisible through the skin after ligation of the upper arm, a vein is exposed, and two ligatures passed under the free portion; the distal end is tied, a longitudinal incision is made in the vein, and a glass canula introduced, filled with saline solution, which is then fastened by means of the second ligature. This, and the pressure of the finger on the vessel, prevent the air from entering the veins. The canula is then connected, by tubing, with the jar containing the whole quantity of the solution. Directly the finger is removed, the injection begins. No ill effects are seen. Dr. Weber relates an instance in which this method was most valuable. He was called by a midwife to a married woman, aged 21, who was seized with *post-partum* hæmorrhage fifteen minutes after the birth of a putrid child. Dr. Weber arrived at 10:30 P.M., an hour after the hæmorrhage had commenced. He found the uterus atonic, reaching to the umbilicus. Massage, hot injections, and hypodermic injections of camphor and ether, were used, with some effect. The hæmorrhage returning, he was called at 3 A.M., and after hot douches and ice-tampons, it again decreased; but cerebral anæmia appearing to an alarming extent, and the pulse being imperceptible, hot compresses were placed on the head, the lower extremities bandaged, and hypodermic injections administered every quarter of an hour. These proving unavailing, it was decided to try an intravenous saline injection. This was successfully administered; and when 500 grammes had been given, hæmorrhage ceased, and the patient who had been conscious the whole time, experienced great relief. The pulse, too, became distinct. On 1,000 grammes being injected, the patient complained of palpitation, and the jar was lowered in order to lessen the pressure on the circulation. When 1,500 grammes had been injected, the pulse was perfectly good, and the cerebral and hæmorrhage symptoms disappeared. The patient felt completely invigorated, and took nourishment without vomiting. She continued to do well, and made an excellent recovery.—*British Medical Journal*, May 1, 1886.

The Hair Roots as Indicators of Bodily or Mental Disease.—Dr. J. Pohl-Pincus, of Berlin, has recently in a *brochure* entitled "Polarised Light as a means of recognising Irritable Conditions of the Nerves of the Scalp," announced that by an examination of the hair roots by polarised light peculiar changes may be observed whenever the patient suffers from physical irritation or mental excitement. This statement is the result of investigations which have now been going on for twenty-five years, and the later observations in the course of the research have uniformily confirmed those made earlier. The hair bulbs are divided into three groups, as follows: Group A: If, in healthy conditions of the body and mind,

the hairs that fall out daily are examined microscopically by polarized light, the enlarged bulbous end of the root will show a white contour, and a yellowish or brownish-red centre. Group B: In all irritable conditions of any organ, also in emotional disturbances of moderate grade, without any apparent bodily disease, the bulbous end of the hair root increases in length and breadth (in proportion to the irritation), the central part appears under polarized light of a violet, blue, or bluish-green color, separated from the white contour by bands of yellow and red. Group C: In higher grades of bodily disease or mental disturbance, the bulb becomes still larger, and the bluish centre changes to green, yellow, or orange. A few hairs of the B and C types are found in normal conditions, especially in those more advanced in life. Dr. Pincus gives thirty-one cases showing the effects of painful disease, but more especially of depressing emotions, upon the appearance of the hair root. The conclusion to be derived from these researches is that bodily disease or mental excitement causes circulatory disturbances, and in consequence a change in the normal nutrition and pigmentation of the hair. This is only in accordance with previous observation, and the chief merit of Dr. Pincus's plan lies in his obtaining a means by which very slight and temporary changes in tissue growth can be detected and approximately measured.—*Lancet*, May 1, 1886.

URETHAN.—MM. MAIRET and COMBEMALE have addressed the following communication to the Academy of Sciences. "We have administered urethan 300 times, to thirty-seven insane patients, with whose form of insanity we were acquainted. The doses varied from ½ gramme to 5 grammes, given in twenty-four hours. When we administered urethan to insane patients, with whose symptoms and condition we were not thoroughly acquainted, it was given to them several times. The mental affections of the patients may be classed as follows: mania, 13; lypemania, 2; imaginary persecution, with sensorial faculties perverted, 3; insanity, consecutive to mania or lypemania, 9; insanity, consecutive to atheromasia, 3; paralytic madness, 7. In paralytic insanity, and insanity from atheromasia, strong doses of urethan did not have any hypnotic effect. In the other forms enumerated, the effect varied according to the excited state of the patient; when this is very intense, the drug does not have any hypnotic effect, but appears to increase the excitement. In less excited conditions, urethan produces sleep, which is calm, regular, and free from nightmares; the patient wakes up easily from a slight noise, or any other disturbing influence, but quickly falls asleep again. Sleep from urethan generally lasts from five to seven hours, and is not followed by any disagreeable sensation. Nutrition does not appear to be affected by urethan, even though it be given during fifteen days. From 2 to 5 grammes produce sleep, but not smaller doses; if 5 grammes be given as a first dose, and fail, it should not be continued. Its action is generally quick; some times two or three hours elapse before sleep results. Its action is not lasting; after two or three days, or six or seven days, according to the patient, it fails to produce sleep; its use must then be discontinued during some days. The earlier and the sounder the sleep resulting from its influence, the sooner is that influence exhausted." MM. Mairet and Combemale's physiological researches on the action of urethan, published in the *Comptes Rendus de la Société de Biologie*, March 20, 1886, indicate that this substance acts directly on the nervous system.—*British Medical Journal*, May 1, 1886.

PERMANGANATE OF POTASH IN AMENORRHŒA.—DR. LEE O. ROGERS, of San Francisco, reports the following case in corroboration of the article of Dr. Billington in the *Medical Record* of March 6: "Miss F., aged 19, was sent to me for advice, and gave the following history: She leads an active life when at home, spending much time in the open air. In July, 1884, she came to a town adjacent to this city on a visit to friends. She began shortly after to grow 'stout,' her abdomen particularly becoming prominent. Her menses disappeared entirely after the period in July, previous to which she had always been perfectly regular. In March, 1885, she was sent to me by her hostess, who thought her pregnant, for the purpose of being kept in the city and confined. The girl seemed to be remarkably healthy and was very 'fat,' and she proved, upon physical examination, to be a virgin. I immediately put her upon potassium permanganate, a 2-grain compressed tablet, four times a day, each tablet to be followed immediately by a large gobletful of water. Much nausea and some vomiting occurred during the administration of the medicine, but I attributed this to the fact that I gave the tablets on an empty stomach, as I accepted Bartholow's theory of the action of the drug. On the fourth day of the administration of the permanganate the menses appeared and lasted four days, after which the patient was sent to her home. She was instructed to inform me if her menses failed to appear on time after her return home, but I have not heard from her." —*Medical Record*, April 17, 1886.

HEALING BY FIRST INTENTION AFTER OPERATION FOR FISTULA.—DR. RUIDNOVSKI, having found that after operations for anal fistula in rural districts where there was no hospital accommodation, and where the hygienic conditions were bad, it is often difficult to get the wounds to heal by second intention, determined to make an attempt to obtain union by first intention by means of sutures. A boy of 14 with an anal fistula was operated upon in this manner; the sinus was found to be not single, but complicated with two lateral sinuses. After the incision had been made into the gut, the soft tissue between the sinuses and the granulations were all scraped away with a Bruns sharp spoon, the surfaces of the wound being brought together by a deep and a superficial row of sutures. Opium was given, and in a week's time the dressings were removed and the wound was found to have healed perfectly by first intention — *Lancet*, April 17, 1886.

THE
Journal of the American Medical Association.
PUBLISHED WEEKLY.

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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Address
JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 65 RANDOLPH STREET,
CHICAGO, ILLINOIS.

SATURDAY, MAY 22, 1886.

ANTIPYRIN IN INFANTILE THERAPEUTICS.

We have recently received from DR. MONCORVO, the well-known Brazilian clinician, a copy of his latest brochure, "De L'Antipyrine dans la Thérapeutique Infantile," from the press of O. Berthier, of Paris. Dr. Moncorvo has already contributed several valuable papers on the action of the new antiperiodics and antipyretics, the most notable being one "De la Coqueluche et de son Traitement par la Résorcine." He is known as a most careful observer and a correct interpreter of facts, and whatever comes from his pen may be received as entitled to the highest consideration.

The work before us is a well printed pamphlet of 156 octavo pages, divided into four chapters, the first chapter being chiefly historical. Dr. Moncorvo has used antipyrin in bronchitis, broncho-pneumonia, tuberculosis, acute impaludism, in rheumatic fever, and in grave cases of fever of suppuration. The cases in which it has been used number more than one hundred. In the first case recorded, one of acute impaludism with acute bronchitis, a child only five months old, who easily bore a dose of 5 grms. and a half of antipyrin in five days. The rectal temperature, which for the first four days had been between 39.5 C. and 40.6 in spite of the use of sulphate of quinine, commenced to fall almost immediately after the administration of antipyrin, and continued to fall for four days. On the first day it fell 2.4 C. in an hour and a half, after a dose of 50 centig. With the fall of the temperature the bronchial and pulmonary phenomena were rapidly ameliorated. In another case of bronchitis with impaludism the rectal temperature fell 4.5 C. within one hour and a half. In a third case, that of a child two months old, the temperature fell 2 C. in 30 minutes, and the child recovered, though it was suffering with whooping cough, broncho-pneumonia, and pernicious fever. These are three cases from nine records. They all show that young children easily bear the administration of antipyrin, and that large doses may be administered with comparative impunity; and Moncorvo declares that the action of antipyrin is much superior to that of quinine administered subcutaneously. In some of the cases, in fact, quinine failed completely.

Dr. Moncorvo is enthusiastic over the action of antipyrin in cases of pulmonary tuberculosis. The defervescence, sometimes very rapid, which follows the administration of this remedy, always causes a considerable calm. The appetite returns; the insomnia and agitation, so frequent at night in the little patients, is followed by tranquil sleep, which in a great measure contributes to the improvement in the general state. If it be true that the action of antipyrin is transitory, it at least possesses the very great advantage that it may be administered for a long time without fear that it will accumulate in the organism, and that it will have no serious effects on the digestive apparatus or the nervous system. One very striking circumstance in connection with the use of antipyrin in these little patients, is the marked modification of the congestive pulmonary phenomena which so often accompany the evolution of the malady; and the frequency of this modification when the medicine is properly administered leaves scarcely a doubt as to the favorable action of antipyrin on the pulmonary circulation. This view is supported by that of Cahn, that antipyrin acts in pneumonia not only as an antipyretic, but that it has a direct action on the pneumonic process. Moncorvo states that even when so much as 2 grams of antipyrin was administered in twenty-four hours he has not seen the excessive sweats which have been mentioned, and that he has altogether dispensed with the use of agaricine, as devised by Norden, or of atropia, as proposed by von Hoffer. He believes that his experience authorizes him to say that antipyrin administered to children in the course of the febrile manifestation of pulmonary on visceral tuberculosis acts admirably by causing a defervescence, which is maintained for several hours, and sometimes even for a whole day, without the production of any untoward result. In some cases the defervescence is almost mathematical after the ingestion of a dose varying from 1 to 2 grams.

Guttmann and others believe that antipyrin and kairin have no effect on intermittent fever, and the question as to their value in impaludism may be re-

garded as still *sub judice*. The opinion of Moncorvo may be regarded as of exceptional value in this question, for there can be no question as to his facilities for observing malarial fevers in all forms and stages. He says: I have been forced by the evidence to regard antipyrin as of powerful utility when it is associated with various salts of quinine. I am fully in accord with Guttmann, Huchard and others when they say that antipyrin has no specific action on the germ producing paludal intoxication. I consider the hypothesis raised by Laveran as entirely admissible: that quinine cures malarial fever by acting directly on the microgerms existing in the blood. Antipyrin may be regarded as having a parallel germicidal property; it cannot replace quinine, but it has the undeniable property of subtracting heat or of abating the high temperatures of grave paludal fevers, with a rapidity evidently superior to that of quinine, while by the free diaphoresis which it causes it opens a large portal for the elimination of the toxic agent. Furthermore, by causing free defervescence, without compromising the forces of the organism already enfeebled, antipyrin creates a condition very favorable for the absorption of quinine. The gravity of the case is not to be judged in all cases by the height of the temperature, since the value of this sign varies according to the nature of the fever; it may be admitted that the exaggerated combustion of which hyperthermia is the expression causes grave regressive disorders of the viscera in exposing the organism to a very great danger. In a general way, then, and particularly in cases of children, it is always well to take into consideration the thermic element in the treatment of febrile affections. The ideal of the therapeutics of malarial fever will be realized by an agent which will possess the property of rapidly lowering the temperature, while acting simultaneously on the germ producing the disease. But while awaiting such an agent, he thinks, we cannot do better than to employ antipyrin and quinine successively.

As regards the dose and methods of administration, Dr. Moncorvo says that while our German *confrères* have given too large doses to adults, their experience has made many fearful of moderate doses for children. When he first began to use it he gave doses of 20 or 25 centig., but gradually recognized that children could tolerate and needed larger doses, and that children are much more tolerant of the drug than adults. Half an hour after the first dose of 25 or 50 centig. or 1 gram had been given the temperature is taken in the hand, and the next dose is graduated according to the fall noted. In another half hour the temperature is again taken, and another dose given if the temperature be still high. Generally in one or two hours the temperature falls one, two or three degrees, though he has not given more than 3 grams in this time. He has had no cases of collapse from antipyrin, and the only inconvenience that he has noticed is the occasional vomiting, which he says is no more frequent in children after taking antipyrin than after the ingestion of other drugs. It may be administered to children either by the mouth, rectum, or subcutaneously. In the first instance it is invariably given in aqueous solution, aromatized with mint or anise. If after taking it some time the stomach of the child rejects it, the syrup of currant or gooseberry will usually mask the taste completely. Its great solubility precludes the necessity for a large volume of the vehicle. When it is thought proper to give it by rectal injection it is well to precede this by an injection of a 2 or 5 per cent. solution of muriate of cocaine, and then give the antipyrin within four or five minutes. The experience of Huchard that when given hypodermatically the action on the temperature is less marked is not confirmed by Moncorvo's experience, nor is there, according to him, any objection whatever to giving the drug in this manner; and he has so given it to the youngest children. The conclusions which he draws in regard to the drug are as follows:

1. On account of its remarkable activity, and its almost mathematical regularity of action, as well as on account of its absolute harmlessness in moderate doses, antipyrin is the most powerful and the least dangerous of the antipyretic agents employed to-day in infantile therapeutics. 2. When given in the course of specific or non-specific inflammatory affections of the respiratory apparatus the defervescence is, almost without exception, very rapid, more or less lasting, and causes at the same time an amelioration of the general state. In tuberculous subjects the continuous administration of this drug often causes a very favorable modification of general nutrition, on account of a reëstablishment of appetite, the disappearance of insomnia, and at the same time a notable amelioration of the cough. 3. In the treatment of acute impaludism, antipyrin is very efficacious, contrary to what has been affirmed by almost all observers. Without any demonstrated specific action on the germs of malarial intoxication, it answers in benign and transient cases by its antithermic action and frank elimination through the skin. In severe cases it is of great service by facilitating a more prompt and more efficacious absorption of salts of quinine. It is thus a powerful adjuvant to quinine by preventing intermittences, so that the maximum

temperatures are lower. 4. In the treatment of some cases of acute rheumatism, and in whatever concerns the febrile element in these cases, its action appears to be very analagous to that of salicylate of soda. 5. In several cases of surgical affections accompanied by a commencing septicæmia, antipyrin caused remarkable modifications of general nutrition by the continued subtraction of heat, which was very high in young children. 6. Defervescence caused by the drug is produced with mathematical regularity in children of every age, and varies from six to twenty-four hours. The succeeding ascent of temperature takes place in an insensible manner, contrary to what is seen when carbolic acid, kairin, and thallin are used. 7. It has already been said that no serious accidents have been caused by the drug in Moncorvo's hands. 8. Antipyrin has a manifest action on the circulatory apparatus, slowing the heart and the pulse. Its influence on vascular tension has not been determined. The diminution in the frequency of the pulse and the lowering of the temperature are rarely ever proportional. 9. It has scarcely any appreciable modifying action on respiration. 10. The urinary secretion is somewhat diminished, but this is usually proportional to the abundance of the sweat. Some examinations have shown a decrease in the amount of urea. It does not cause albuminuria, and has been known to check it.

A DOCTOR'S EXPERIENCES IN THREE CONTINENTS.

Such is the title of a most interesting and charmingly egotistic book of some six hundred pages by Dr. Edward Warren-Bey. It is in a series of letters to Dr. John Morris, of Baltimore, and being in the form of letters to an intimate friend the frequent use of the first personal pronoun, so far from being at all disagreeable, adds to the interest of the volume. The letters are not in the form of a diary, but facts, dates and comments are given in a manner which is at the same time connected and disconnected. The personal memoirs of distinguished men are always of interest, particularly when well written, and it is apparent from these letters that Dr. Warren's fluency of speech is not greater than his readiness with his pen.

A man who took an active part in the surgery of the late war, who has been an active practitioner in two sections of this country, chief surgeon of the Egyptian War Department, and for some years an active practitioner in Paris, the friend of the much lamented Otis and Gross, of Charcot, Zeb Vance, Ismail Pasha, Landolt, Abbate-Bey, General Mott, Alfred Swaine Taylor, Thomas Stevenson, and Sir James Paget, could but have an interesting history. Very much of this written history is a record of trials and sorrows, some of which must come to everyone, and of difficulties overcome. Perhaps one of the most remarkable facts in the life of Dr. Warren is that he did not study the profession of his first choice —law— but was induced by his father to study medicine. This is chiefly remarkable on account of his eminently successful career as a physician.

Taken altogether, we do not know of any book the reading of which will make an evening pass more quickly or more pleasantly, and the chief regret on parting with it is that it is not longer. For those who are inclined to believe that there is nothing good in America, who buy their watches in Geneva, their umbrellas in Paris, and their ill-fitting clothes in London, we particularly recommend the following, from the last letter:—"Before bidding you adieu, I must say this much: The longer I have resided abroad, the more intensely American have I become, and the greater has grown my love and appreciation of my native land. Other lands may possess their treasures of art, their marvels of luxury, their triumphs of architecture, and all that is calculated to captivate the imagination and ravish the senses, but for the truest solution of the problem of human existence, the grandest victories of human skill over the laws of nature, the most fortuitous combination of those conditions which constitute society, and the perfection of a governmental system—that which governs the least and protects the most—America is the land preëminently blessed of Heaven. Call me an enthusiast if you will, but for me her skies are the brightest, her mountains the grandest, her rivers the broadest, her fields the greenest, her women the loveliest, her men the noblest, her history the proudest, and all that relates to her the best of all the world besides. Elsewhere her sons may be content to linger for a season, but to them she is the only land in which they can ever realize the idea of *home*, or feel that they are aught else than aliens and sojourners."

A RATIONAL CONCLUSION.

The editor of the *Medical Record*, of May 15, in speaking of the organization of the Executive Committee of the Ninth International Medical Congress says: "But the organization and management are definitely settled, and we have no desire now to hamper its future work. We do not think that hereafter the International Medical Congress will meet with any aggressive opposition or criticism. Its managers have chosen their course, and we shall be glad, for

the sake of our country's reputation, to see them successful in it." In another paragraph, the same editor says: "Still, we say to foreign delegates, You will meet a large number of able and hospitable gentlemen at the Congress, you will be made warmly welcome by all Americans, and you will hear no quarrelling while you are in the States."

Kindly sentiments and assurances of future peace, even though late in finding expression, are none the less welcome. And if the Executive Committee of the Congress is to be permitted to carry forward its responsible work without further opposition, "our country's reputation" will be abundantly vindicated by the result.

A NEW COLLEGE OF PHARMACY.

Some two months ago a number of prominent pharmacists, who were active members of the Chicago College of Pharmacy, withdrew from this organization, and five of them have founded a new school, known as the Illinois College of Pharmacy. The government of the Chicago College of Pharmacy is in the hands of a College Association, composed almost entirely of the younger alumni, who sometimes have been capable of committing very strange blunders, such as electing young and inexperienced graduates to the Board of Trustees of the college. After trying in vain to give to the college a more stable and rational organization, the oldest and best known of the trustees withdrew, leaving the school entirely in the hands of the younger element.

The Illinois College of Pharmacy is governed by a board of five trustees: Wm. Bodemann, D. R. Dyche, H. S. Maynard, T. H. Patterson and E. H. Sargent. Their names are a sufficient guaranty of stability, as all are well known throughout the West.

Professors Oscar Oldberg and J. H. Long withdrew from the faculty of the old school and have been elected to the Chairs of Pharmacy and Chemistry in the new. The new school will be the Pharmaceutical Department of the Northwestern University.

IN MEMORY OF PROFESSOR AUSTIN FLINT.—During the session of the Executive Committee of the Ninth International Medical Congress, May 3, 1886, appropriate resolutions were unanimously adopted expressing their high appreciation of his character and noble life work, and their deep regret for the loss of the late President of the Congress.

A just tribute was also paid to his memory by the President of the American Medical Association in his Annual Address, on the first day of the meeting of that body in St. Louis, May 4, 1886; and another was contained in the report of the chairman of the Standing Committee on Necrology, which was called for on the last day of the session and referred for publication.

PRIZES OF THE AMERICAN MEDICAL ASSOCIATION.—We have received two anonymous letters asking for information regarding the prizes of the Association and the regulations governing their award. We think the only action taken by the Association concerning prizes during the last two years can be found in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Volume V, page 531, number for November 7, 1885, and relates to prizes of honor only.

NOT VERY ACCURATE.—The *Medical News* of Philadelphia, in endeavoring to give the "officers of the International Medical Congress," in its issue for May 15 inst., commits at least *four* errors of commission and *three* of omission—enough certainly for one half column.

SOCIETY PROCEEDINGS.

AMERICAN CLIMATOLOGICAL ASSOCIATION.

Third Annual Session held at the Hall of the College of Physicians, Philadelphia, May 10 and 11, 1886.

MONDAY, MAY 10, FIRST DAY.

MORNING SESSION.

The meeting was called to order by THE PRESIDENT, WILLIAM PEPPER, M.D., LL.D., of Philadelphia.

THE PRESIDENT opened the session with an address on

THE CAUSES AND DISTRIBUTION OF CONSUMPTION IN PENNSYLVANIA,

being a preliminary report of investigation still being prosecuted.

DR. A. L. LOOMIS, of New York read a paper on

THE EFFECT OF HIGH ALTITUDES ON CARDIAC DISEASE.

In 1880, while in the Adirondacks, the author was requested to see a gentleman who was thought to be dying. The patient aged 40 years, was found gasping for breath, cyanosed, with no apparent radial pulse, and bathed with profuse perspiration. Under the hypodermic use of digitalis, morphia and brandy he improved. The following day it was learned that he had left New York apparently well. When he reached an elevation of one thousand feet the breathing became difficult, and as a higher altitude was reached,

the difficult was increased and was accompanied by cardiac palpitation and a sense of oppression in the epigastrium. When he reached St. Regis lake at an elevation of two thousand feet he appeared to be dying. Physical examination showed well-marked dilatation of both ventricles, with a loud systolic murmur heard over the præcordium and transmitted a little to the left. At the end of three days he returned to New York. As he reached lower levels the difficulty of breathing diminished and when he reached New York he could walk on a level. The irregular heart action, however, continued, and the feet soon became œdematous and he died six weeks later with general anasarca and heart insufficiency. No autopsy was made. The patient had never presented any evidence of cardiac disease prior to his trip to the mountains.

The speaker had seen in all twenty-six similar cases, the histories of five of which were given, one of which follows:

Mrs. S., aged 43, had mitral insufficiency for over ten years, but never exhibited any cardiac symptoms. She went to Colorado. When she reached an elevation of four thousand feet she was suddenly seized with extreme dyspnœa and hæmorrhage. There was palpitation of the heart and constriction of the chest. The following day she started on her return. As she reached a lower level she improved. Physical examination revealed extreme dilatation of both ventricles, complete cardiac diastolism, indistinct apex beat, crepitation over the base of both lungs with feeble or absent respiratory murmur. The patient died four weeks after her return. The autopsy showed both ventricles much dilated, old thickening and insufficiency of the mitral valve, some interstitial myocarditis and degeneration of the muscular fibre of the heart walls. The right lung was the seat of pneumonia and old infarctions. All the other viscera were in a state of extreme venous congestion.

Dr. Loomis then went on to say that in all the cases coming under his observation, the ventricular dilatation was unquestionably the cause of the sudden development of distressing symptoms, and that the commencement of the fatal issue seemed to be directly due to the effects on the cardiac circulation of a change from a lower to a higher altitude.

Two important factors which lead to permanent cardiac insufficiency, are, first, the condition of pulmonary distension consequent upon rarefaction of the atmosphere, and second the resultant condition of the circulating blood.

If the explanation of the effects of high altitude upon the cardiac circulation be accepted, the risks which one with even slight cardiac insufficiency runs by passing from a lower to a higher altitude is certainly very great, and if the insufficiency is extensive, such changes become immediately dangerous. It must be remembered that cardiac insufficiency may exist in those who give no evidence of it.

Clinically the speaker relied upon what is termed the muscular element of the first sound of the heart, in determining the condition of the muscle walls. Clinical experience had also convinced him that it was unsafe for one to make such change, whose cardiac rhythm was greatly disturbed by nervous excitement, or by rapidly ascending a long flight of stairs.

Dr. Frank Donaldson, of Baltimore, read a paper, entitled

A PRELIMINARY ACCOUNT IN REGARD TO CIRCULATORY AND RESPIRATORY CHANGES OBSERVED IN ANIMALS PLACED IN THE PNEUMATIC CABINET.

The experiments had been performed on rabbits which had been chloralized. It was found that:

1. When the animal is breathing air from outside of the cabinet, rarefaction of air within the cabinet causes a marked fall of general arterial pressure; but has no influence on the pulse rate. The fall of pressure lasts only a short time (ten or twenty seconds) and is often followed by a temporary rise above the normal.

2. This fall of systemic arterial pressure depends on two factors,—greater flow of blood to the skin when the air around the animal is rarefied and greater accumulation of blood in the lungs when they are distended.

3. Of these two factors, accumulation of blood in the lungs is the more effective, for if the animal breathes air from the cabinet, and not from the outside, rarefaction of the air within the cabinet (in this case, accompanied by no special expansion of the thorax) has but a trivial effect in lowering arterial pressure.

4. When the animal is breathing external air, rarefaction of the air within the cabinet usually has no effect upon the respiratory rate, nor upon the extent of individual respiratory acts, unless the fall of blood pressure be considerable. If it be considerable, symptoms of anæmia of the medulla oblongata show themselves. In some cases, there is more forcible dyspnœic breathing and, in some dyspnœic convulsions similar to those which occur when an animal is bled to death, and due to the same cause, viz., deficient blood flowing through the respiratory centre.

5. The rapid recovery of general arterial pressure while the animal is still in a rarefied atmosphere, but breathing external air, is probably due to excitation of the vaso-motor centre, which as is well known is excited whenever the blood power is defective.

6. The brain enclosed in a rigid box which is practically unaffected by variations in the atmospheric pressure, has its circulation more disturbed in the pneumatic cabinet than any other organ with the exception of the lungs.

7. Compression of the air within the cabinet while the lungs are in communication with the external air, causes a considerable transient rise of blood pressure. This is probably mainly due to the forcing of the blood from the cutaneous vessels, but there has not yet been sufficient time to thoroughly investigate this point.

8. Compression of air within the cabinet while the lungs are in communication with the external air, slows the pulse as the arterial pressure rises. This is probably due to the excitation of the cardio-inhibitory centre by increased intra-cranial blood-pressure. Further experiments are, however necessary before this can be positively stated.

9. In certain cases, when the air within the cabinet is rarefied and the animal is breathing external air, the respiratory movements cease altogether for several seconds. As to the cause of this physiological apnœa, we are not yet ready to form an opinion. It may be due to extra accumulation of air in the alveoli of the lung, or to distension of the lungs, exciting those fibres of the pneumogastric which tend to check inspiration.

THE PRESIDENT had seen not only in the class of cases described by Dr. Loomis, but also in cases of cardiac disease originating in high altitudes, the grave consequences which followed. A small amount of organic lesion under such circumstances produces very serious symptoms, even preventing the patient from assuming the erect posture.

DR. E. D. HUDSON, of New York, thought that heart disease was not prevalent in high altitudes, and that the tonicity of the heart was really increased so that such persons were better able to withstand fatigue than those of a lower level. The recognition of the importance of the point to which Dr. Loomis has called attention would no doubt result in the saving of many lives. Still, when necessary, we should not be deterred from sending patients to high altitudes, taking care that sufficient time is spent in the transition so that the circulation may gradually adapt itself to the change in altitude.

DR. LOOMIS said that there was no danger to a good heart whose nervous condition was normal. If such individuals suffer, it is only temporarily. After fifty years of age, the condition of the heart walls is uncertain. This high altitude is only one of the causes of over-distention of the cardiac cavities. He did not believe that it was safe for any man with arterial degeneration or dilatation of the vertricles to take the chances of going into a high altitude or taxing his his heart beyond a certain limit.

EVENING SESSION.

DR. HERBERT F. WILLIAMS, of New York, read

A CLINICAL REPORT OF CASES TREATED BY PNEUMATIC DIFFERENTIATION.

with the assistance of Mr. Ketchum, of New York, the inventor of the apparatus, a demonstration of the working of the pneumatic cabinet was given. The speaker then reported forty-five cases in addition to those previously reported, in which he had used the cabinet as a method of treatment. Sixteen cases were reported in detail.

DR. VINCENT Y. BOWDITCH, of Boston, reported a

TEN MONTHS' EXPERIENCE WITH PNEUMATIC DIFFERENTIATION.

The speaker endeavored to give the clinical results of the treatment in thirty-seven cases since June 30, 1885. Pulmonary phthisis, in its tubercular and non-tubercular forms; bronchitis in its acute and chronic forms, with and without emphysema or asthma; and retraction of the lung from long standing pleuritic effusions, are the diseases which he had treated in the pneumatic cabinet. His experience was such that although he had been unable to accomplish thus far such brilliant results as some others had claimed, yet he felt convinced of the very marked beneficial effect of the cabinet in many cases where other means had failed to give relief, and of its curative power in one case of incipient tubercular trouble, and he looked forward with hope to what may be done in the future with this new method of treatment. The speaker said his chief desire was that the profession should investigate the matter thoroughly and with fairness, and publish their results, for by this means only can a just estimate of the merits of the treatment be established. He felt that it should be entrusted only to a physician's care or to that of a reliable assistant, and that if placed in hospitals the most accurate methods of recording cases should be insisted upon before allowing the cabinets to be used. Carelessness of investigation in the present stage of its existence might do infinite harm to a method which may prove, when properly used, of infinite service.

The following table was given showing the percentage of cases in which benefit had been accomplished:

19+ per cent. of all the cases treated received no benefit.

23+ per cent. of all the cases treated received very slight, moderate or temporary benefit.

46+ per cent. of all the cases treated received marked benefit (for varying periods).

7+ per cent. of all the cases treated received remarkable benefit.

3+ per cent. (one case of incipient tuberculosis) was cured.

DR. I. H. PLATT, of Brooklyn, read a paper on

THE PHYSICS AND PHYSIOLOGICAL ACTION OF PNEUMATIC DIFFERENTIATION.

Pneumatic differentiation is the process by which the air surrounding the body and that entering the lungs is rendered of different densities. There are three forms, which for convenience may be designated positive, negative and alternative. He proposed to consider chiefly positive differentiation, which is the form in which the air surrounding the body is of less pressure than that entering the lungs. The apparatus introduced to the profession by Dr. Williams, and known as the pneumatic cabinet, is the most convenient for applying this treatment. As the difference in pressure used is very slight, seldom exceeding that indicated by a fall of one inch of the mercurial column, the absolute change in air pressure is an insignificant factor, the essential element being the differentiation.

The effect of reduced air pressure upon the periphery of the body is to increase the expansion of the thorax in inspiration and to diminish its contraction in expiration, consequently to increase the amount of residual air. By the increased pressure in the lungs it will tend to exsanguinate them and to raise the arterial blood pressure in the general circulation.

Two of the claims put forward by Dr. Williams and Mr. Ketchum he believed to be unfounded. The first is that the effect of removing a slight degree of pressure from the periphery of the body is radically different from that of increasing the pressure of the

air entering the lungs, the former acting as a *vis a fronte*, the latter as a *vis a tergo*. One of the most elementary principles of physics teaches that suction is not a force operating from in front, but is merely removing the pressure from one side of a body and allowing the undiminished pressure to act upon the other side. It makes no difference whether pressure is taken from the outside of the thorax or added to the inside; in either case it is the unbalanced pressure which causes the increased expansion. The other proposition which he combats is that the spray or vapor used in conjunction with the differential process can be carried further into the air passages or more thoroughly condensed upon them than a spray or vapor could be under normal conditions. They cannot be carried so far, for the reason the residual air is increased, and consequently the inspired air which carries the vapor or spray cannot penetrate so far. It is claimed that the vapor of medicinal substances is condensed in the lungs during the differential process by the compression consequent upon the commencement of the expiratory act. This is impossible, first, because compression only acts to condense a saturated vapor, and the air passages cannot be saturated with the vapor of a medicinal substance; and secondly, because no greater compression is produced at the commencement of the expiration under the influence of differential pressure than under other circumstances. Such compression as does occur is due to the resistance offered by friction of the bronchial tubes and by the narrow opening of the glottis, and it is impossible that these should be affected by the differential pressure.

He believes that such benefit as results from the use of the cabinet is due mainly to the reduction of congestion in the lungs by the air pressure within them and by the increased expansion and movement of the lungs favoring their greater action and modifying their nutrition.

Tuesday, May 11, Second Day.

Morning Session.

First Vice-President, Dr. Frank Donaldson, of Baltimore, in the Chair.

The report of the Committee on Health Resorts was received and ordered published in the Transactions.

Dr. Roland O. Curtin, of Philadelphia, read a paper on

Rocky Mountain Fever.

The speaker in the first place referred to a communication received from Dr. D. O. Dougan, of Denver, Colorado, bearing upon this subject. The experience of Dr. Dougan had led him to regard all cases of mountain fever as belonging to one or another of the well known, already classified varieties. The cases, however, present variations from the usual course of the fevers to which we would assign them. Some of the cases are ephemeral in character and difficult of classification. The fever especially designated by the name mountain fever presents many features of typhoid fever. Some of the reasons for believing these cases to be an irregular or mild type of typhoid fever are that such cases are usually seen at the season of the year when typhoid fever is most prevalent; they occur most commonly under conditions favorable to the development of typhoid fever; not infrequently cases will present some characteristic feature of typhoid, leaving no doubt as to the diagnosis. In the high altitudes where mountain fever is said to occur, a large proportion of the cases of undoubted typhoid pursue a remarkably mild course. Dr. Dougan concluded with a protest against admitting mountain fever as a specific disease, until its right to such a position had been proven by clinical and pathological researches.

Dr. Curtin had seen, in Wyoming Territory, four cases which had been diagnosed as mountain fever. At some point in the disease, all these cases had diarrhœa, and in one it was continuous. One of the patients died suddenly at the end of three weeks, but no autopsy was made; in one case there was a doubtful eruption; one of the cases had epistaxis in the beginning of the illness; tympanites was more or less marked in all cases. Dr. Curtin considered these cases to be typhoid or typho-malarial in character. Sometimes the cases belonged, in all probability, to the class termed simple continued fever. The diagnosis of mountain fever was doubtless, in large part, the result of incompetency on the part of the observers, and the use of the term is continued largely as a result of fashion.

The opinion of other investigators was cited, all of whom expressed views similar to those given above.

Dr. C. C. Rice, of New York, read a paper entitled,

How the Therapeutic Value of our Mineral Waters may be Increased.

The following conclusions were advanced:

1. A physician should make an analysis of our mineral springs.
2. The medicinal value of the waters should be tested by clinical investigation, and the conclusions published for the benefit of the profession.
3. If the waters are found to present marked merit, the physician should interest himself in developing the springs, improving the baths, etc.
4. Physicians, in sending patients to the springs, should be more careful to select the proper water, and should send with the patient the diagnosis and history of the condition for the benefit of the physician at the baths.
5. The patient, while at the baths, should be under a more rigid medical discipline.
6. The social life of our watering places should be reorganized.

The following papers, describing the climate of various places were then read:

The Climate of Mexico, by Dr. Didama, of Syracuse; *The Southern Adirondacks*, by Edward T. Bruen, M.D., of Philadelphia; *The Climate of El Paso, Texas*, by Dr. E. W. Schauffler, of Kansas City; *Southern Pine Park, a New Health Resort in North Carolina*, by Dr. A. N. Bell.

AFTERNOON SESSION.

The following were elected

OFFICERS FOR THE ENSUING YEAR.

President—Dr. Frank Donaldson, Baltimore.

First Vice-President—Dr. V. Y. Bowditch, Boston.

Second Vice-President—Dr. Roland G. Curtin, Philadelphia.

Secretary and Treasurer—Dr. J. B. Walker, Philadelphia.

Additional Member of Council—Dr. F. C. Shattuck, Boston.

Elected to Membership—Dr. F. Donaldson, Jr., Baltimore; Dr. G. R. Butler, Brooklyn; Dr. W. Matthews, U. S. A.; and Dr. J. H. Musser, Philadelphia.

The following memorial was presented by DR. J. EWING MEARS, Secretary of a Special Committee of the American Surgical Association, appointed to consider the proposition with reference to the establishment of a

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

WASHINGTON, D. C., April 30, 1886.

To the President of the American Climatological Association:

In view of the fact that there are a number of special medical organizations now in existence in the United States, each having for its aim and attainment the advancement of the special department of medicine for which it was organized; and since the members of said special societies are of the representative men of the profession in America, many of whom are, at the same time, fellows or members of several of these special societies, which double membership, if it may be so expressed, necessitates them—if desirous of attending two or more of the meetings of these societies the same year—to make as many separate trips from home and often with much loss of time to themselves and inconvenience to their patients. Therefore, it appears necessary that some arrangement should be made with the different societies as to a uniform time and place of holding their sessions, so that those members who wish to attend the meetings of more than one association may be enabled to do so without useless expenditure of money or unnecessary loss of time.

An extended correspondence, together with personal conference with many of the most prominent fellows of this and other of the associations, has disclosed the fact that there is a decided and growing inclination to unite the various societies into a common whole, whereby it would become a general organization, representative of the various special departments of the profession in America.

The plan proposed and which is offered for consideration is to unite the following named associations into a Congress based upon the outlines which are now to be explained: American Surgical Association; American Ophthalmological Association; American Otological Association; American Neurological Association; American Laryngological Association; American Gynæcological Association; American Dermatological Association; American Climatological Association, and American Clinical and Pathological Association. These associations to be united under the name and style of "The Congress of American Physicians and Surgeons."

The plan of organization hereby submitted, and subject to any alterations or amendments which may be deemed wise and proper, is that each society will preserve its own name, constitution and by-laws; elect its own officers and fellows; hold its own sessions apart from the others at the time and place of meeting; publish its own transactions, and do all other acts of which, by virtue of its constitution and by-laws, it has the inherent right to do, thus preserving its own autonomy.

The Congress to be composed of these special societies when in convention, and its meetings to be held annually in the city of Washington—the most appropriate place for the assembling of such an organization. The constitution and by-laws of the Congress to be formed by a committee composed of a like number chosen from each separate society. The opening session of each annual meeting of the Congress to be devoted to such general business as may pertain to the interest of the association as a whole. The Congress to be presided over by a President, elected annually, and who shall deliver the opening address upon the first day of the session. The manner of choosing the President to be as follows: By a nominating committee composed of one member elected from each special association, or otherwise, as may be determined upon by the special society itself; this committee nominating one or more candidates for the office of President, whose election is to be by ballot on the last day of the annual session, and in a convention of all the societies assembled. The Presidents of the special societies to become *ex officio* Vice-Presidents of the Congress. Membership in the Congress to be acquired only by virtue of fellowship in one or another of the special associations. Other officers of the Congress to be elected or appointed as may hereafter be determined upon by the associations in convention.

These are the outlines of a union proposed for the consideration of the members of this Association, which, if it should meet their approval, can be submitted to the action of the societies which have been mentioned. It was suggested that the Chair appoint a committee of five to bring the subject before the next special Association, which meets this spring or coming summer, and which, in the event of a concurrence of opinion on the part of said society, shall act in concord with their committee appointed to confer with the other societies, in the order of their meetings. This enlarged committee to report at a convention of all the societies, which shall be requested to hold their next annual meetings at the same dates in the month of June, 1888, in the city of Washington.

To avoid any confusion as to the time of next meeting, each society (this year) could adjourn to meet in June, 1888, leaving the date to be fixed by the enlarged committee after their work of conference had been finished, it then being only necessary to apprise the Secretaries of the respective associa-

tions, who will give notice to the various fellows and members.

This proposition is the result of calm consideration, and has been approvingly endorsed by quite a number of the representative gentlemen of the profession, both in and out of this special Association.

The plan proposed is simply to unite into one great body the already existing special societies, and it is proposed from the honest conviction that such a union will prove of inestimable benefit to them individually and collectively.

The special committee appointed by the American Surgical Association to consider the above memorial, reported that it viewed with great satisfaction the perfection of a plan through which the meetings of the associations above named in the city of Washington at the same time of the year, may be accomplished, and the meeting of all the associations in general assembly on such days as may be determined, for the purpose of delivering of addresses upon general subjects in medicine, such meetings to be held without any formal organization through which the associations meeting would sacrifice their autonomy.

To accomplish these purposes, the committee offers the following resolution:

Resolved, That a committee of five Fellows of this Association be appointed, which shall be authorized to confer with committees of other associations interested in the adoption of a plan of a convention as hereinbefore stated, and report upon the same at the next meeting for the action of the Association.

The resolution was adopted, and the following committee was appointed in accordance therewith:

C. H. MASTIN, M.D., Mobile, Chairman.
C. T. PARKES, M.D., Chicago.
J. FORD THOMPSON, M.D., Washington.
N. SENN, M.D., Milwaukee.
J. EWING MEARS, M.D., Philadelphia, Sec'y.

The proposition was approved, and it was decided to appoint a committee to be announced later in the day.

DR. J. H. MUSSER, of Philadelphia, made some

SUGGESTIONS REGARDING THE PREVENTION OF PHTHISIS IN MILL HANDS.

He said that it was rather to prevent that state of the system which often leads to phthisis, that he desired to make some suggestions. The suggestions more particularly referred to factory laborers. He showed that states of ill health were common in this class of artisans, and asserted that it was very largely due to an inadequate supply of food, which was improperly selected and prepared, and to carelessness in attention to digestion. This cause obtained more largely than bad hygienic surroundings or than the occupation itself. If this be true, the remedy proposed was to have the plan of the Willimantic Cotton Company used by all mill proprietors. That company has proved by experience and careful calculation that it pays them in quality and quantity of work done to supply milk to their boys and bouillon to their women twice daily, and that the health of the operatives is promoted and their lives prolonged thereby. Dr. Musser trusted that the members of the Society could influence proprietors to adopt this plan, and thereby close one of the avenues to disease and death.

DR. C. L. DANA, of New York, read a paper entitled

A STATISTICAL INQUIRY REGARDING THE RELATION OF HIGH ALTITUDES TO NERVOUS DISEASES.

The speaker presented the results of inquiries made at his request of twelve physicians living in Colorado Springs, regarding the effects of high climates on the nervous system in health and disease. The majority thought that chorea in children was more frequent there than in lower altitudes; that the climate was bad for nervous women. The high altitudes do not necessarily injure epileptics, and in anæmic cases might cause improvement. Insomnia dependent upon anæmia and mal-nutrition was benefited and generally cured. The climate has no specific influence for good upon diseases of the spinal cord, and if anything, the contrary. The speaker was of the opinion that high altitudes had a tendency to excite lithæmia and anthritism with consequent irritating effects upon the nerve centres. The best effects of the climate were seen in anæmic insomnia, neurasthenia and melancholia.

THE PRESIDENT announced as the committee to confer with the committees of other special societies with reference to the establishment of a "Congress of American Physicians and Surgeons," Dr. A. L. Loomis, New York; Dr. F. Donaldson, Baltimore; Dr. F. C. Shattuck, Boston; Dr. E. T. Bruen, Philadelphia; and Dr. W. W. Johnson, Washington.

It was resolved to appoint a committee of three, with Dr. C. C. Rice as chairman, to investigate *The Therapeutical Properties of the Different Mineral Springs.*

After passing a vote of thanks to the College of Physicians for the use of their hall, the Society adjourned *sine die.*

SUFFOLK DISTRICT MEDICAL SOCIETY.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY AND HYGIENE.

Stated Meeting, April 14, 1886.

F. I. KNIGHT, M.D., CHAIRMAN.

ALBERT N. BLODGETT, M.D., SECRETARY.

DR. J. W. FARLOW exhibited a girl aged 12 years, in whom was seen

A LARGE ARTERY PASSING IN A DIAGONAL DIRECTION ACROSS THE POSTERIOR WALL OF THE PHARYNX,

where its pulsations were plainly visible, and could be felt by the finger. The vessel was of larger size than the radial artery in the same patient, and was covered only by the mucous membrane. Dr. Farlow described the condition of the parts in the following words.

"The case is interesting on account of its extreme

rarity, and because of its bearing on the surgery of the throat. It is a case in which we may see and feel a large pulsating artery on each side of the back of the pharynx, about a quarter of an inch inside of the posterior pillar of the fauces. In a service of several years in the throat-room of the Boston Dispensary, I have never met a case before. Dr. Knight remembers to have seen one similar case. During the week following the appearance of the present patient, another case was observed at the same institution, but in the second case the vessel was seen and felt on the right side only. It occupied, however, the same situation. Dr. Leland saw a single case at the dispensary, about a week later, which he kindly asked me to examine with him. I find the abnormal distribution of the large vessels of the pharynx hardly mentioned in works on diseases of the throat. In anatomical works, the possibility of variation in distribution of the vascular channels is alluded to in a cursory manner; but clinically very little has been said or written upon this subject.

"The vessels are usually deeply situated and quite small. The vessel in the left side in the present case feels considerably larger than the radial. In all surgical operations on the back of the pharynx, such as incision, or the application of the Galvano-cautery, we may see at once how important it is to bear in mind the possibility of such a case as this, and to examine carefully as to the exact position of the blood-vessels. If the tonsillar branch were abnormally large, it would be sufficient to cause a very severe hæmorrhage after tonsillotomy, or deep incision; as in the case reported by Dr. Lefferts of New York, in which a vessel was cut by the guillotine, of so large a size as to require the application of a ligature, on account of the alarming hæmorrhage. Possibly in other cases of profuse bleeding after tonsillotomy, a similar condition of enlarged or abnormally situated vessels might be found."

DR. W. N. BULLARD then presented a girl aged 13 years, who was affected with

LUPUS ERYTHEMATOSUS.

The disease had existed one year, and was seated on the face and hands. The color of the skin in these parts was of a mottled hue, and on the face were a large number of small scars, which were somewhat below the level of the surrounding skin, and were of a dead white color. On the hands, which were similarly affected, the disease appeared as large elevated nodules of a livid color, and were confined principally to the extensor surfaces of the fingers, though the whole dorsum of each hand was of the same livid and mottled hue as the face. The disease extended only to a point just above the wrist, on each hand, where it abruptly terminated. The general health of the child was otherwise good.

DR. WHITE pronounced the case a typical one, but not so rare as has been supposed. The disease is much more common here than in Europe, but the small size of the present patient makes this instance seem more than usually interesting. The girl, however, is 13 years old, and after this age the appearance of this form of lupus is not so excessively rare. It is not frequently seen on the hands, but the co-existence of the same affection upon the face is very instructive as well as interesting. The disease is essentially an inflammatory process, confined to the sebaceous follicles.

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Perityphlitis—Foreign Bodies in the Œsophagus—The New York Academy of Medicine.

At the meeting of the New York Surgical Society, of which a partial report was given in THE JOURNAL of May 15, Dr. H. B. Sands read some remarks on *Perityphlitis*. Within the last few months, he said, a number of cases of this affection had come under his observation, and they had had the effect of impressing very strongly upon his mind the necessity of absolute rest in its treatment. He could recall the case of a physician suffering from perityphlitis, who was doing fairly well, but who, while the disease was in progress, was allowed to take several doses of cathartic medicine, each of which only aggravated the trouble. Finally, after a copious passage, produced by an enema, he became collapsed, and death soon followed. The autopsy was made by Dr. George L. Peabody, but no cause was found for the existing perforation of the appendix. In this case it was evident that for a time the difficulty had been confined within quite narrow limits, and it could not be doubted that a better chance of recovery would have been afforded if the patient had been kept absolutely quiet, and opium given instead of cathartics.

The second case referred to was one which he saw in consultation with Dr. A. B. Ball. The patient was over 60 years of age, and Dr. Sands was called in because the symptoms were supposed to be those of strangulated hernia. It was true that he had a hernia on the right side; but the hernial sac was found so flaccid that the present trouble could not be attributed to this. The symptoms, also, were not exactly those of strangulated hernia. The case was in reality one of perityphlitis; but the patient was allowed to get up and go down town. The result was that peritonitis set in, and he died a short time afterwards. The post-mortem examination showed perityphlitis, with perforation of the vermiform appendix, and an empty hernial sac on the right side. This case also, he thought, emphasized the importance of rest and opium in perityphlitis.

In one of the other cases narrated by Dr. Sands he said that for the first time in his experience he had met with the accident of cutting the intestine in an operation; and that this had occurred notwithstanding the fact that the hypodermic syringe was first resorted to, with the effect of withdrawing pus. When in operating the tumor had been arrived at, all who were present received the impression that a piece of intestine was being dealt with, and it seemed to him personally that there was a portion of the cœcum in the wound, instead of the usual abscess cavity. He made

a cut with the scissors, and the impression conveyed to his mind was that he was cutting intestine. From the opening there came pus and air, but no fæces. The next day (Sunday), however, fæces made their appearance, and by Monday night they were flowing away in large quantity. This free flow of fæces continued for about ten days, but at the end of a fortnight it had ceased altogether. The patient got entirely well in three weeks. Dr. Sands thought that in this instance the hypodermic needle must have passed through both walls of the intestine before penetrating the abscess.

The last two cases mentioned he had seen very recently. One of them was that of a young lad, the son of a physician. There were symptoms of peritonitis, in connection with perityphlitis, and after discussing the subject thoroughly with Dr. Sands, the father declined to have an early operation performed. The case went on pretty well for a week, but on the ninth day the patient became much worse. There was subnormal temperature, distension of the abdomen, and vomiting; and the condition was in every way alarming. He operated, in the usual way, April 24, and the abscess cavity was found to contain pus and fæces. The patient, when last seen, was convalescent.

In a case in which he operated on Sunday, April 25, the patient was a lad of 14. The first symptoms had appeared just a week before, and he first saw him on Wednesday, when he thought there were signs of perforation on the side of the peritoneum. There was marked tympanites, and he was unable to make out the presence of a circumscribed tumor, although Dr. A. H. Smith, who had been in attendance previously, said that he had discovered one when the abdomen was not so much distended. Dr. Sands saw the case again on Saturday, when the condition was found to be very bad. As in the previous case, he debated very carefully whether to cut in the median line, or at the side, and thought it preferable to make the incision in the latter position. Accordingly, he operated at 2 P.M. on Sunday, and when the layers of the abdomen were cut down upon, about half an ounce of pus was seen to flow from a small opening. The abscess was doubtless in the cavity of the peritoneum, and the case, as had been suspected, was one in which perforation had taken place toward the serous membrane, and not one of perityphlitis amenable to the usual operation. The patient died at 6 P.M. the same day.

In closing Dr. Sands said that he wished to call attention especially to the question whether in these cases laparotomy was preferable to the ordinary operation for perityphlitis. When peritonitis had become general, laparotomy, in his opinion, offered no hope of saving life.

Dr. C. K. Bridden having remarked that he was inclined to doubt whether Dr. Sands had in reality wounded the intestine in the case in which he believed this accident to have occurred (stating that if he had done so, he did not think that the patient would have recovered so readily), Dr. Sands replied that it was quite possible to have a simple wound of the intestine, and have a rapid recovery also. In illustration, he related a remarkable case of gunshot injuries of the intestines which had occurred in his own hospital experience.

Dr. A. P. Gerster presented a specimen which he thought constituted an interesting contribution to the subject of *Foreign Bodies in the Œsophagus*. It was taken from a child 12 months old, in whom signs of respiratory difficulty, apparently in the larynx, first showed themselves at the age of 6 months. About two months before Dr. Gerster saw the infant a specialist in diseases of children was called in consultation, and made the diagnosis of a tumor, with a broad pedicle, in the larynx. There was increasing difficulty in breathing, with occasional aggravated paroxysms; and when the case came under his observation, he found that there was frequent respiration, and that the dyspnœa was principally expiratory, there being but little difficulty in inspiration. Owing to the paroxysms set up by the attempt to make a laryngoscopic examination, it was impossible to get a view of the parts. Up to this time the general condition of the child had been good; but there was now considerable trouble in deglutition, and it began to fail appreciably. The most careful inquiry failed to elicit the history of any foreign body having been swallowed. In view of the increasing frequency of the attacks of suffocation, he advised an exploratory tracheotomy, to which the parents consented.

On account of the extremely short and thick neck of the infant, he was obliged to select the higher operation; but when the trachea was opened, he was disappointed to find that there was not the slightest improvement in the respiration. A soft catheter was introduced into the trachea and the branches, but no abnormality could be detected. One very curious thing, however, was noticed. When a canula was introduced into the trachea, the difficulty of respiration was increased; but as soon as he placed his finger over the mouth of the canula, the breathing became easier. Fearing to keep the child, who was in very bad condition, longer under the influence of anæsthetics, he ordered the canula, with its orifice plugged, to be kept in position; his design being to keep the trachea open, and on a future occasion make a more careful examination. The next day, however, pneumonia set in, and in three days death resulted.

At the autopsy the larynx was found to be entirely normal; but a little lower than midway between the cricoid cartilage and the bifurcation of the trachea there was a triangular defect of the trachea, and as the seat of this defect the sharp edge of a metallic body projected into the trachea for about three millimetres. The foreign body was a flat brass button, three-quarters of an inch in diameter. Corresponding to the defect in the trachea, was another defect in the œsophagus, circular in shape, and almost one centimetre in diameter. The foreign body was imbedded in the tissues between the trachea and the œsophagus; being held in position precisely as a picture by its frame. The ulcerative process had evidently been terminated by complete cicatrization. No active inflammation was found in progress at the time of death; but the tissues were considerably thickened by former inflammatory processes.

Dr. Gerster said that among the questions which suggested themselves in connection with this case were the following: How shall we explain the fact that there were no symptoms of any great dyspnœa at the time the foreign body was swallowed? Why is it that the symptoms of pronounced dyspnœa have developed so late? In answer to the second inquiry, he said that as time went on, the cicatricial contraction of the parts became greater, and thus the symptoms of dyspnœa and dysphagia became progressively aggravated. Another question that might arise was, How shall we explain the difficulty of expiration, as contrasted with the comparative ease of inspiration? This, he believed, was on account of the position of the foreign body, which was oblique, and gave to it the action of a valve. The stream of air rushing up from below had the effect of raising the projecting edge of the button, and thus placing it more transversely to the axis of the trachea. The minute dimensions of an infantile trachea, still further reduced in this case by cicatricial contraction, would be influenced by very minute changes of position.

As regards the question whether the foreign body could have been extracted, he felt constrained to express a negative opinion. If, after tracheotomy, he had made use of a suitable probe, instead of the soft catheter, he would undoubtedly have detected the presence of the foreign body; but he doubted whether it could have been removed through the trachea without producing instant death from suffocation.

Dr. T. M. Markoe referred to a case recently reported by Bennett May, in which he successfully extracted a foreign body which had been in the œsophagus for three years, and had ulcerated partly into the trachea. In answer to a question by Dr. Gerster, Dr. Markoe stated that the child in this case was 7 years old, and that he fully appreciated the marked advantages which this more advanced age would give over the case of an infant such as Dr. Gerster's patient.

In reply to a question by Dr. R. F. Weir, Dr. Gerster said that he believed that an attempt to remove the foreign body would have proved fatal, because the diameter of the button was larger than the calibre of the trachea; and hence it would have completely plugged up the passage, and probably for a sufficiently long time, during the efforts at extraction, to cause suffocation.

Dr. Weir then said that he differed from Dr. Gerster on this point, as in operations upon the throat he had more than once seen the trachea entirely occluded temporarily, in a digital exploration, without any serious result following. He therefore thought that if the foreign body could have been seized, it might have been safely removed. The risk of suffocation would come from the button slipping from the grasp of the forceps after it had been lifted out of its bed; but even then experience had already shown that such bodies often tilt sideways, so as to offer the least obstruction to air currents.

That the position taken by your correspondent, that the New York Academy of Medicine, by the recent alterations which it has made in its constitution and by-laws, has completely deprived itself of the power of disciplining its members, is proved to be incontrovertible by the significant fact that at the stated meeting of the Academy held May 6, the following proposed amendment to Article VIII, Section 1, of the constitution, was introduced: "The Academy may suspend or expel a Fellow for violation of its regulations, *or the commission of any act which unfavorably affects the character of the medical profession of the interests of the Academy.*"

The incident related in a recent letter, however "unsavory" it may be, is not so "unauthenticated" as the *Medical Record* would have its readers believe; and it is a well known fact that the proposed amendment to the constitution is simply the sequel of the case referred to. As to the facts of that case, as published, they were received directly from a prominent officer of the Academy, whose word no one acquainted with his standing would think of impeaching.

P. B. P.

MISCELLANEOUS.

USE OF MICROSCOPE FOR DETECTING OTHER ANIMAL FATS IN BUTTER.

[The following letter from DR. THOMAS TAYLOR, of the U. S. Department of Agriculture, to the Editor of *Public Health in Minnesota*, is of sufficient interest to publish in full.]

My Dear Sir:—When I commenced microscopic observations of butter and fats, several years ago, it was with a firm conviction that I should be able to discriminate between pure dairy butter and oleomargerine by means of polarized light; basing my convictions on the fact that pure dairy butter is a non-polarizing substance, while the solid and semi-fluid fats contained in such substances as lard and beef fat oil are polarizing bodies.

When a specimen of butter-like material is presented for testing, I mount about a grain of it upon a microscopic slide (a piece of glass 3 × 1 inch), over which I place a circular glass over, and compress the substance into a thin film, or until it appears semi-transparent. If it presents a white, even, cloud-like appearance, and has the odor and taste of butter, I conclude that it is probably butter. If when boiled over the flame of a spirit-lamp, it gives off the odor of butter, I consider this an indication in its favor. If when triturated with a few drops of strong sulphuric acid, it slowly becomes of a pale salmon color, within five to twenty minutes, or of a light brick red, changing after the lapse of about twenty-four hours to a tallow color, this is another indication of its genuineness. Lard and beef fat, in the same length of time and under similar conditions, each assume a walnut color. (For a fuller explanation of my acid test, see my first paper on the acid treatment of butter and fats.)

If the sample is submitted to the action of polarized light and selenite plate, and appears of a uniform green, red, blue, or yellow color, according to the selenite used, we have another indication that the substance is pure butter; normal butter, under these conditions, never exhibits prismatic colors.

Sometimes large crystals of salt cause the appearance of prismatic colors by refraction. These should be removed. Butter that has been exposed to the light until it is bleached, or butter that has been in immediate contact for a long time with a substance that absorbs its oil, as when placed in wooden tubs, has undergone a chemical change, and should not be considered as normal butter. A superior butter when boiled with or without oil, will yield large crystals of fat by attending to the following directions: Place from half an ounce to an ounce of butter in a test tube of sufficient capacity, holding the tube by means of a twisted wire over a spirit lamp, until the butter is thoroughly boiled for about one minute; then, in order to crystalize, let it cool in an atmosphere of 50 to 60 degrees F., during a space of from 12 to 24 hours, so that it will crystallize slowly: this will give the best results. Take a portion of this, when cooled, on the point of a pen-knife, place it on a glass slide, add to it one drop of sweet oil, and, with a pin, separate the crystals, which are large enough to be seen with the naked eye. Subject the specimen to polarized light; turn the polarizer until a dark ground is produced, and the butter crystal will appear bright, exhibiting upon its surface a black cross, in outline the same as that known as the cross of St. Andrew.

When old butter, or butter which has been kept in a warm atmosphere, is boiled and cooled, a secondary crystallization quickly takes place, of rosette-like form, which generally proceeds from the center of the cross. A very superior, freshly-made butter, rich in fats, which has been kept cool previous to re-boiling, map be preserved a long time at a temperature of 60 degrees, without exhibiting the rosette crystals; some of which may be observed in the act of "budding," the interspaces filled with the rosettes which have floated off from the original globose forms which show the black cross. These appearances are among the conditions which distinguish pure butter from the fats of beef, mutton and lard. Use a magnifying power of about 250 diameters for the small rosette-like bodies, which vary greatly in size, and might be mistaken by an inexperienced observer for the crystals of the fat of beef, in their early stage of development.

Beef Fat.—Take any portion of beef fat, render it slowly in an iron pot without water, strain it and set it away to cool. To an ounce of solid fat thus obtained, add cotton seed oil; heat in a test-tube nearly to the point of decomposition, and let it cool for about 24 hours at a temperature of about 60 degrees, F. Its consistency should then be semi-fluid. The crystals of the fat of beef are very small on first boiling and should be reboiled and cooled several times. In this way the crystals enlarge and become better defined, and appear quite different from the secondary crystals of butter. High powers are required for this fat, say from 450 to 1000 diameters. The crystals of beef-fat treated as above, and viewed under high powers, present a foliated appearance. In my ordinary methods of mounting for temporary use, I take care to press the covers very gently, especially when mounting large crystals of butter. Beef, mutton and lard may be pressed without damage.

Lard.—No reliance can be placed upon the lards of commerce as to their purity. Leaf lard is now rendered by some firms with a small quantity of soda for the purpose of dissolving the tissues; by this means an impure lard is produced, which contains a small amount of soap in which the crystals are not so well defined as in lards rendered without the aid of chemicals.

Lard composed of stearine and cotton-seed oil is also in the market; it may contain beef fat, for one of the forms of stearine is a roughly made by-product of the oil of beef fat. A lard thus made will show strongly marked stellar crystals. To avoid mistakes in regard to the crystallography of the fats of plants and animals, I always render the fats I use in my experiments, noting the stages of crystallization through which they pass in oil solutions.

Having noted some of the peculiarities of normal butter, the crystalline character of boiled butter, of lard, and of tallow, one is in a position to discriminate between pure normal butter and the butter substitutes containing free fats. That pure dairy butter viewed under polarized light and selenite plate, shows no prismatic colors, the following experiments demonstrate: Place a green selenite between the polarizer and the analyzer and a plain green color will be observed. Then place a mounted slide of normal butter under the selenite, view again, and the same even green color is observed. Now, place a small portion of lard and beef fat oil on the slide, and with polarized light and the same green selenite, the fat will exhibit prismatic colors, showing the contrast between a polarizing body, such as the semi-solid fats, and a non-polarizing body like pure dairy butter.

Butter and oleomargarine.—The preceding experiments explain why butterine, which contains solid or semi-fluid translucent fats, such as lard and tallow, in combination with unboiled butter, is so easily detected when submitted to the action of solarized light and selenite plate. The crystals of lard or of tallow are seldom absent, and are easily distinguished from the mass of amorphous fats with which they are combined. This is one of the most important of all my tests of oleomargarine and butterine.

Prof. H. A. Weber, of the Ohio Experiment Station, reports in Bulletin 13 of that Station, under date of March 1, 1886, that by the use of my butter tests on a variety of butters procured from those on exhibition at the Stock Show at Chicago, he observed invariably the form of the St. Andrew's cross, as I have described it; and further, that on submitting lard to polarized light, "nothing but the small irregular stellated bodies could be seen, in which cross was entirely wanting. A large number of slides were mounted and examined, but not a single 'butter crystal' could be found." Prof. Weber further states that "oleo oil" (beef-fat oil), treated in a like manner, gave similar results, "only small stellate crystals were present. Thus far the results and statements of Dr. Taylor were fully corroborated." He thus acknowledges the correctness of three of my original experiments, but fails to apply them in practice. According to his report he made fifteen experiments

in all; of these only the first three have any relations with my methods; the remaining twelve are based on his uniform plan of boiling all of his combinations of butterine at a high temperature.

I have just examined a composition of butter and "oleo oil" (beef-fat oil), in the proportions given above. The butter was melted at a temperature of 104° F., and combined with the beef-fat oil. The mounted slide did not show any butter crystals, while it did exhibit those of beef, (oleo oil). In this case the methods of those engaged in the production of butterine and oleomargarine, were imitated by only melting the butter and fats at a very low temperature. Prof. Weber erred in boiling his oleomargarine, and this holds good with all his experiments, from four to fifteen inclusive. His last twelve experiments must be eliminated from our consideration of this subject, because they have no relation to my methods of discriminating between butter and oleomargarine; nor has the black cross of boiled butter any direct relation to this subject, since dairy butter is not sold in the markets in a boiled condition. It is only when the differentiation of the respective crystals of the fats of the various plants and animals is considered, that the cross of butter becomes an important factor.

Prof. Weber's experiments, wherein by triturating lard and oleo oil with a little salt and water, he forms globular fatty bodies, which exhibit a cross like that of butter, affords an interesting confirmation of my statement to the Commissioner of Agriculture; see the annual report for 1885, wherein I say, that any body which is globular, translucent, smooth and polarizing, will show a cross. (See also the Annual Report of the American Society of Microscopists for same year.)

That which Prof. Weber terms fat "globule," is such a body as I described, "globular, translucent, smooth and polarizing." Polarizing, because it contains semi-solid, translucent fats. Had Prof. Weber examined such globules by plain transmitted light, he would have discovered that they have no resemblance to the globose butter crystal viewed under the same conditions, which has a uniform structure peculiar to itself. (See figure 2, of the abstract of my paper on Butter and Fats, read before the American Association for the Advancement of Science, last September).

In an experiment made as late as the 20th of this month, in the presence of Prof. Wiley, Chief Chemist of the Department of Agriculture, and two of his assistants, Mr. Richardson and Mr. Richards, I demonstrated that a butterine made at my request in the Laboratory, which contained but *1 per cent. lard to 99 per cent. pure butter*, exhibited, when examined by polarized light and green selenite, well defined crystals of lard, of a rich golden color on a green ground, the green representing the butter. In this way the adulteration was at once detected.

The experiments of Prof. Weber are calculated to introduce confusion and difficulty into a matter in itself comparatively clear and easy. The problem which has engaged his attention seems not to have been how to discriminate between butter and its substitutes, but how to subject them to conditions which, as far as possible should render them indistinguishable.

It must be borne in mind that the manufacturers of counterfeit butter are obliged to limit their treatment of the substances they use to such manipulations as are consistent with the salability of the product.

OHIO STATE MEDICAL SOCIETY.—The forty-first annual meeting of this Society will be held at Akron, Ohio, on June 2, 3, and 4, 1885, under the Presidency of Wm. Morrow Beach, M.D. The list of papers is very large and unusually promising. Delegates and members should procure railway certificates from the Secretary, G. A. Collamore, M.D., of Toledo, before leaving home, specifying the route chosen.

A NEW WORK ON RENAL DISEASES.—A forthcoming work on "Bright's Disease and Allied Affections," by Dr. Charles W. Purdy, of Chicago, is announced by Lea Brothers & Co. It will be published simultaneously by H. K. Lewis, of London.

CHICAGO MEDICO-LEGAL SOCIETY.—This Society, which has been recently formed in this City, has for its object the investigation, study and advancement of the science of medical jurisprudence, the punishment of unprofessional and criminal practices by members of the medical and legal professions, the prevention of blackmailing, and the procuring of such legislation as may be necessary to these ends. Applications for membership should be addressed to the Executive Committee, through the Secretary, Marshall D. Ewell, M.D., 170 Washington St., and should be accompanied by $5.00, which will be returned if the applicant be rejected. Any regular practitioner of medicine or lawyer in good standing may, upon recommendation of the Executive Committee, become a member.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 8, 1886, TO MAY 14, 1886.

Major David L. Huntington, Surgeon, ordered to proceed from Washington to Davis's Island, New York Harbor, on public business connected with the reconstruction of the present hospital building at that depot, or the erection of a new one. On completion of this duty to rejoin his station. (S. O. 109, A. G. O., May 10, 1886.)

Major Henry R. Tilton, Surgeon, from Dept. East to Dept. Cal.

Major John Brooks. Surgeon, from Dept. Cal. to Dept. East.

Capt. Edward T. Comegys, Asst. Surgeon, from Dept. Mo. to Dept. East.

Capt. Aaron H. Appel, Asst. Surgeon, from Dept East to Dept. Mo. (S. O. 106, A. G. O., May 6, 1886.)

Capt. James A. Finley, Asst. Surgeon, ordered for duty at Ft. Buford, D. T. (S. O. 39, Dept. Dak., May 5, 1886.)

Capt. R. B. Benham, Asst. Surgeon, ordered to Dept. of the Platte. (S. O. 109, A. G. O., May 10, 1886,)

Capt. A. V. Cherbonnier, Medical Storekeeper, U. S. Army, granted leave of absence for four months, with permission to apply for four months' extension. (S. O. 109, A. G. O., May 10, 1886.)

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING MAY 15, 1886.

Bransford, J. F., Surgeon, invalided home from Pacific Station.

Winslow, Geo. F., Surgeon, ordered June 1 prox. to the U. S. S. "Atlanta."

Heffinger, A. C., P. A. Surgeon, detached from the Navy Yard, Portsmouth, N. H., and ordered to U. S. S. "Atlanta." June 1.